Sustainable Endurance Sport Events in Coastal Regions : Assessment of Goa's Suitability for Ironman 70.3

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ABSTRACT

Purpose: The objective of this case study is to assess the appropriateness of Goa as a destination for conducting Ironman 70.3 events based on the sustainability approach.

Methodology: The assessment model incorporates the use of secondary data regarding the four different arenas of sustainability: the environmental arena, the economic arena, the arena of infrastructure and the arena of policy and governance and the findings are supplemented

Key Results: The robust tourist infrastructure and government support in Goa indicate high potential for economic benefits, brand positioning and international exposure. The major risks include: Environment-related constraints, including the preservation of the coastal ecosystem, waste management and the carbon footprint of tourism activities, particularly in peak tourist seasons.

Conclusion: Goa has great potential in sustainably hosting Ironman 70.3 events, but this requires various policy alignments and great sustainability planning and execution efforts.

Recommendations: Event-specific environmental management (waste, emissions, coastal protection) should be improved and the connection between the event and development should be emphasized. Continuous monitoring and reporting frameworks should be set up to conform to international sustainability standards.

Keywords : sport tourism, sustainability, triathlon, Goa, Ironman 70.3

Introduction

Sport tourism is thus recognized as a vibrant field where the boundaries between sport and tourism are increasingly blurred, including travel for participation or spectating sporting events (Vrondou, 2017). Emerging within this field are events based on endurance sports, such as long-distance triathlons, increasing in popularity across locations and identified as a means of tourism development through events (Wood, 2005). Coastal locations are generally identified as attractive locations, integrating natural icons with developed tourism infrastructure, but simultaneously requiring attention to ecosystem sustainability (Carneiro et al., 2016). The case of Goa brings out a coastal setting where tourism is economically imperative and sustainability issues are relevant; thus, this case study is applicable for evaluating the suitability of endurance events based on the sustainability factor (Government of Goa, 2021).

There now appears to be an appreciation for the fact that sport event tourism needs to occur in a sustainable way in order to protect the environments that support the quality of the destination from degradation in the future (International Olympic Committee, 2017). High visitor numbers and the operational logistics of sport events can have negative effects on the marine ecosystems, especially in areas that have high capacity constraints and regulation impediments (Central Water Commission, 2024). Nevertheless, there appears to have been a prevailing concern with the previous scholars regarding the sport events in general, particularly in the context of mega events, while there appear to have been relatively reduced findings for the application of sport events in a sustainable way for the support of sport-tourism in lesser developed regions, especially in the context of the marine sport environment of the sport event destination (Gibson, 1998). Evidence acquired in the marine sport tourism context for the sport event destination appears to indicate that while there might have been an awareness of sustainability, there appears not to have been the same consistency in the conduct in a sustainable way, particularly for less complex environments, especially regarding organizers within the sport event context (Carneiro et al., 2016).

In this regard, this study focuses on evaluating the applicability of hosting an Ironman 70.3 triathlon event sustainably in the context of Goa's suitability. Generally, the Ironman 70.3 event symbolizes the type of standardized endurance sports activities that have the potential for regional, or even global appeal and simultaneous focused pressures on the transportation, resources and infrastructure (Ironman Group, 2016).

The underlying premise or argument and rationale for this research study is based upon evaluating whether and in which manner an activity involving an endurance sports event might and ought to or can and should be harmonized with or integrated

into the broader sustainability paradigm within a regulated coastal area, which is simultaneously subject to the pressures of tourism (Government of Goa, 2021).

Specifically, this study offers secondary research findings and rationale into the relevant sustainability context and issues and applications facing destination managers and policymakers regarding the optimization and maximization of tourism versus the sustainability and collective stewardship, preservation and conservation interests, needs and requirements and applications. This advances the generally accepted body of regional, theoretical, or empirically based knowledge and research.

Thus, the aim of the study is to analyze the importance of the environmental, economic, infrastructure and policy/governance dimensions in relation to hosting an Ironman 70.3 event in Goa. This would help in bringing forth the challenges and opportunities arising from these dimensions with an ultimate goal of making recommendations on how to improve the sustainability of sports events like the Ironman 70.3.

Methodology

The research is based on a detailed analysis of secondary data sources through an interpretative qualitative methodological approach. The literature that is relevant to this research is based on publications concerned with the topic of sport tourism and sustainability, along with case studies based on endurance events. The literature will form a multi-dimensional framework for analysis of sustainability in sport events for coastal areas.

For the purpose of analysis, a conceptual framework has been modified and adapted to suit the research. This framework has its roots in theoretical and contemporary visions associated with sustainability and applied to the context of sport tourist destinations. The framework comprises of four main pillars. These include environmental, economic, infrastructure and policy/governance issues. The framework above captures the full spectrum of a holistic approach to sustainability that brings together matters concerning environmental integrity, the balancing and distribution of socio-economic benefits and issues pertaining to institutional capabilities and capacities necessary and integral to effective and continuous improvements. Within the context of the framework described above, the infrastructure pillar takes into account physical and social infrastructure considerations necessary within the broader context of endurance events and associated legacy development.

The methodology adopted a qualitative content analysis technique. Sources were analyzed to harvest data relevant to either the state of Goa or similar endurance event and coastline tourism-related issues within the four areas. In the area of environment

sustainability, sources like event sustainability reports and carbon footprint studies were analyzed to determine general event effects and solutions that can mitigate these when conducting triathlon events (One Carbon World, 2024 & 2025). Economic concerns were taken from economic research studies related to sport events tourism-related spending and local economic integration (Wood, 2005). Event infrastructure readiness was studied from documents related to tourism planning and development in Goa, as well as best practices from building coastal sport tourism infrastructure systems that make destinations more competitive (Government of Goa, 2021). Lastly, policy-related concerns were analyzed from sources that specialize in regulation related to the coastal environment and sport event management to determine sustainability approaches and general perceptions regarding coastal management (Central Water Commission, 2024).

In the course of the analysis, triangulation methods ensured the reliability of interpretation of the data. This entailed comparing official records with scholarly literature. For instance, sustainability risks identified from the perspective of destinations related to the tourism industry were analyzed in light of stakeholder perceptions. As the research did not involve human participants, the need for expert ethical clearance did not arise.

Results

Environmental Dimension

One of the primary concerns for organizing an endurance sport like Ironman 70.3 in a coastal area, including Goa, is the sustainability of the environment. The coastal environment, consisting of beaches, sea and related flora and fauna, is fragile and should be regulated. In India, the notification related to the Coastal Regulation Zone (CRZ) regulates activities around the shoreline and governs the sustainability of the environment. Any beach activities, like the organization of large events, involving the setting up of stages, stands and transition points for the triathlon in Ironman 70.3 Goa, have to be done in accordance with the CRZ notification, clearly keeping away from the shoreline, particularly the area within the high tide level and obtaining environmental clearance for the temporary activities (Mascarenhas, 1999). Therefore, organizing Ironman 70.3 Goa requires addressing the environmental authorities at the initial stages to see if the proposed layout, transition points and other activities remain environmentally safe.

Aside from regulatory requirements, there is a need for strategies to address direct environment effects. The event-related activity that raises the most concern is waste generation associated with events. Sustainability reports for triathlon events emphasize

strategies for waste diversion techniques like recycling, composting and selective waste collection for those that are difficult to recycle, which should be facilitated by adequate event plans and vendor coordination (Ironman Group, 2016). As for Goa's tourism environment, waste management and stress to the environment are common sustainability issues, which emphasize the need for a detailed plan for waste and environment restoration after the events (Government of Goa, 2021). The Ironman 70.3 would thus be suitable when proper strategies for waste segregation, speed clean-up strategies and vendor plans are in place to avoid dissemination of trash into nearby bodies (Central Water Commission, 2024).

The quality of water and the state of the ecosystem are also of considerable importance in the context of the coastal triathlon because the swimming component relies on appropriate conditions in the waters adjacent to the coastline. Although the current study does not identify any new parameters of water quality, the management of the coastline considers that the pressures of tourism, on one hand and sewage and shoreline pollution, on the other hand, may compound each other in complex ways that threaten the suitability of the environment, starting from the appropriate management of materials that could find their way into the sea, such as minimizing the use of plastics (International Olympic Committee, 2021).

Carbon footprint, or the effect of carbon on the environment, is another aspect of environment sustainability. All endurance events produce carbon emissions stemming from the transportation of athletes and employees, energy utilization, as well as logistics. These aspects of sustainability in the reporting of triathlons illustrate the importance of measuring the associated operational carbon emissions in the endurance event industry to mitigate such emissions through the implementation of associated strategies within the overall sustainability strategy for the event (Ironman Group, 2016). Carbon footprint measurement strategies employed within the governance structure of triathlons, such as carbon-neutral reporting, provide pertinent methodology for measuring carbon emissions within endurance events (One Carbon World, 2025).

It is evident from the results of the environment assessment that a sustainable event is possible within the confines of the coastal regulation management rules that are applicable in Goa, if effective management is done (Mascarenhas, 1999). To this effect, there must therefore be effective environment management planning regarding waste diversion, water protection and pollution control that is geared towards the sustainability plans applicable to global sports events (International Olympic Committee, 2024).

Economic Dimension

Organizing the Ironman 70.3 triathlon in Goa involves significant economic aspects that could be positive if these are properly managed to generate maximum advantages to Goa. Hosting sports activities has been linked to increased tourist expenses related to accommodations, food, transport and additional services and the sustainability reports of endurance sports offer evidence for such economic activities (Wood, 2005). Goa as a destination could experience the influx of foreign athletes and fans attending the branded sports event and could potentially experience additional tourist activities beyond the organized event, as long as the destination management capacity can manage this pressure without affecting the social well-being of Goa (Peric et al., 2019).

Job and business opportunities in the area are another possible advantage. Major events create short-term employment (event management, medical services, logistics, food and beverage services), while they also create a short-term demand for services if the area is given priority in procurement practices (Wood, 2005). Evidence from a seafront sports tourism context has shown that sustainable enterprises maintain a greater level of economic advantage locally when they forge supplier-community linkages and align their activities with the characteristics of the destinations (Carneiro et al., 2016). For the Ironman 70.3 Goa event, this would involve vendor or expo participation and service procurement arrangements that maximize linkages with the area.

Regarding the literature on destination planning, the role of events in tourism can be seen as promoting destination branding and product diversification when combined in a tourism context (Wood, 2005). For the case of Goa, the inclusion of endurance events within the tourism product offering would help in dealing with seasonality and quality tourism; this should be done while ensuring sustainability to avoid the cost being imposed on local communities. As such, economic plans for Ironman 70.3 should include strategies for equitable sharing of benefits and local business involvement (Miragaia et al., 2025).

The second significant economic factor is that of benefit distribution. Event tourism is likely to invite negative feedback if more benefits are distributed to non-local stakeholders instead of the local community. Meeting this challenge is ensured by negotiating local purchasing targets, employment guarantees and downstream investments that retain economic value within the local economy (Peric et al., 2019). Harmonizing the event with local development plans can further enhance economic benefits since sports events can become policy tools when aligned with local development plans for the destination (Miragaia et al., 2025). With respect

to the case of the state of Goa, this would mean harnessing the event platform to promote local cultural industries and to cultivate visits to destinations away from the coastal zone, rather than being confined to the immediate coastline.

Research into tourist perceptions conducted in Goa shows sustainability and benefit sharing factors contribute to tourism development and employment generation perceptions (Venugopalan, 2021). A sporting endurance event may enhance positive perceptions by providing direct support and benefit to local sources of livelihood, skills and resource exploitation (Peric et al., 2019). In due course, sustainability and successful delivery may develop a positive reputation in relation to the sport tourism market, with incentives to develop capacity if sustainability metrics follow growth patterns (International Olympic Committee, 2024). Consequently, the economic evaluation tends to indicate the potential benefits of the Ironman 70.3 Goa as a methodology for tourist diversification and branding, with long-run advantages accrued by ensuring social linkages and addressing potential negative externalities (Miragaia et al., 2025).

Infrastructure Dimension

The infrastructure aspect involves the physical and organizational necessities of hosting events and then the readiness of the related socio-cultural factors to facilitate such events Goa has a tourism industry and this means such infrastructural necessities exist and details of tourism planning include factors such as infrastructure and service levels identified as factors of tourism development (Government of Goa, 2021).

Conducting an endurance triathlon, infrastructure readiness consideration factors include adequate facilitation of routes, their accessibility and then municipal services' readiness to take care of possible demands (Moradi, 2025).

However, this event also poses infrastructure-related issues. Roads that are generally congested could become bottlenecks during race closures; thus, effective traffic rerouting systems are required. Medical preparedness is also essential; while Goan cities have good hospitals and emergency care facilities, these must be integrated into race-day activities.

Infrastructural requirements for a triathlon event are usually temporary and modular and designed for each sport, but coastal considerations set certain boundaries. The suitability of the location and infrastructure, therefore, has to be determined within set boundaries of coastal regulations and doesn't require sensitive dune or intertidal areas that could be affected (Mascarenhas, 1999). Carrying capacity is a factor that needs to be considered, especially with the increase in the number of people participating or viewing the events (Zhao, 2023).

Human resources and capacity also play important roles. Capacity-building among local volunteers and staff members (lifeguards, marshals and medical teams) can improve the level of safety and the quality of services and can be helpful for the event's legacy by ensuring the expertise is shared locally by repeating the delivery cycles. (Miragaia et al., 2025)

Community support is an important component of readiness and sustainability. The literature on destination highlights the significance of community relations and factors of social capital in determining the acceptability of tourism development and determining the sustainability of events, especially where disruption factors (traffic, noise and overcrowding) impact particular localities (Van Ninh & Van Tam, 2026). Anticipatory engagement through communication, volunteering and engagement with lasting legacies can help enhance community support and minimize the source of tension related to recurring events (Ma et al., 2023).

Policy and Governance Dimension

The dimension related to policy and governance plays a vital part in ensuring that the development of endurance sports events relate to sustainable development. For the state of Goa, a positive policy environment related to effective governance would play a crucial part in improving the viability of holding Ironman 70.3.

At the state level, the role of policy and institutional strength is paramount to ensuring that a sports endurance event can be conceptualized and implemented for sustainable destination development, following a standard of quality and diversification of tourist products and services form a functional platform for implementing event tourism initiatives in Goa (Mascarenhas, 1999). An important question, therefore, related to the sustainability of these events is how well can the institutions handle coordination of permits, environment, safety and services while ensuring levels of transparency and accountability (International Olympic Committee, 2024).

One of the most important governance factors in a coastal environment is environmental regulation and coastal zone management. The Coastal Regulation Zone Notification regulates and limits activities near shorelines to ensure environmental sustainability, which means that even sporting events must be organized so as not to infringe these regulations and identified areas of sensitivity (Mascarenhas, 1999). A more general view of coastal zone governance focuses on remediation, surveillance and risk management of tourism-related impacts, which apply specifically to the delivery of sporting events (Central Water Commission, 2024). Consequently, governance adequacy must be predictable, monitorable (including managing waste and water

issues) and punitive with regard to restoration and compliance (International Olympic Committee, 2021, 2024).

The other level of governance is linked to the compliance level for sport organisations and events; this includes safety, environment and reporting (Ironman Group, 2016). Carbon footprints and neutrality strategies in the evaluation for the sport's level of governance are some strategies that can be applied for the event's level of sustainability (One Carbon World, 2024, 2025). The applicable level of sustainability for Goa would require collaboration between government bodies such as transport, police, health department and other municipal bodies for a safe environment along the route, which is framed by the coastline boundaries of Goa (Mascarenhas, 1999).

Public policy can also capitalize on the potential of endurance sports for other public goals, like development or health, provided these goals do not undermine the importance given to environmental and benefit-share considerations. Literature on events and policy suggests sports events can provide elements of development policy provided these events become an integrated policy component with a clear local benefit valued by stakeholders alike (Miragaia et al., 2025). This means specific "goals" of sports events, like skill development or contributions to infrastructure, should overlap with "commitments" to minimize risks (International Olympic Committee, 2017).

Another governance issue for the sustainable hosting of events is stakeholder engagement. Cooperation and collective action involving various stakeholders are commonly linked with more sustainable forms of innovation in the area of tourism, especially when there are trade-offs between the interests of the environment and society (Van Ninh and Van Tam, 2026). Institutionalizing stakeholders' feedback, whether before or after the event and establishing grievance procedures may help with legitimacy and adaptive governance over several editions (International Olympic Committee, 2021).

In conclusion, the policy and governance review reveals that the key to sustainability lies not within the policy or policy statements but within the ability of operations, including integrated plans, an environmental policy framework, public reporting systems and engagement processes (Miragaia et al., 2025).

Discussion

Among the outcomes of this multi-dimensional analysis of the sustainability of Goa as a destination for the Ironman 70.3 competition, it is evident that the interaction between the benefits and the requirements is complex on multiple fronts. On the

environment-friendly aspect, for instance, it confirms the importance of respecting the limitations and capacities set by nature, particularly for coast areas (Zhao, 2023). When events such as endurance races are organized on a regular basis, it is necessary to track the sustainability thresholds for the environment, including the water quality, the condition of beaches and the amounts of waste and wastewater generated (Central Water Commission, 2024; International Olympic Committee, 2024), so far as the negative impacts are kept, as far as possible, within the sustainability bounds by ensuring, through organized capacity control or the adoption of careful schedules, limited disturbances to the ecology (Chen, 2025).

From an economic standpoint, the Goa case shows how endurance events, when integrated with policy and readiness, could act as catalysts for development themselves. Correspondingly, from one angle, criticisms of early sporting tourism ventures have argued that there may be a lack of concern for what might be considered benefit vs. cost, or, put differently, what groups might be better served vs. what groups might be bearing the burden of such tourism ventures. Nevertheless, in terms of countering this, our discussion of this issue always centers on including the local population in a fashion which seeks to ensure that economic benefits (such as travel spending, job creation, worldwide press exposure and so forth) benefit the population being serviced and staying in this one location and not merely being 'spent and gone' unknown and uninterrupted within their home country, beyond simply being noticed in terms of traveler-dollars.

On the infrastructure and community aspect, our results map the significance that while Goa offers a solid foundation to stage an event, it is necessary to exercise prudent management. On one level, the success of staging of the Ironman 70.3 event in Goa, India on earlier occasion indicates that the management of logistics (road closures, health support, management of volunteers) has been satisfactory. Still, if a focus on stage endurance sporting activities is to be continued as regular events in this location, there has to be further improvement and tuning of the infrastructure. One critical aspect here is transportation management: this will require planning related to road closure timings and possible systems to control traffic flow management and alternate routes; further, while hosting sporting activities attached to stage endurance events here will require infrastructure planning to address possible health issues due to high humidity and high temperatures that may require health stations to be augmented. Comparing this situation with the event organised by the Ironman series held at Langkawi, Malaysia, another tropical location similar to Goa, indicates that as a special measure to mitigate health issues to athletes the provision of extra water and ice stations as well as cooling tents has been introduced; this will require innovation from the management of this location as well to better assist athletes who may suffer

from high levels of heat. Another factor to address here is to take care to leave the location after events without causing further harm to the local environment and this will fall under the management of infrastructure and policy compliance. One more aspect that our view here highlights is that while more attention has to focus on building infrastructure here to sustain sporting activities of this type, equal focus has to be placed on an aspect that is often overlooked: this is the aspect that this is not merely an event that has to undertake all activities alone but rather must mobilize local resources as well to address increased health-related issues as suggested here: this will mean that to develop a resource-rich team of event management staff here will become one critical model that can transform current management strategies here to stage sporting activities as regular events without harm to local infrastructure as these local resource persons will revise and implement from event to event here.

One thing that appears evident when comparing the results above with other research is the sustainability trade-offs. It is obvious that Ironman races provide positive trade-offs economically and socially through the influx of tourist dollars, the potential for improvement in physical infrastructure and the promotion of physical wellness among attendees. On the negative side, there are trade-offs related to the sustainability of the environment and society, including emissions, trash and disruption. It may be hypothesized, for the state of Goa, a trade-off could be the burden of tourist traffic on the physical infrastructure for the potential benefits and branding associated with hosting the Ironman competition. It is a matter of striking a balance so that the negative trade-offs remain within acceptable parameters. Necessary steps may include limiting the number attending wherever possible, through tickets, tourism authorities regulating numbers in restricted viewing areas and expanding the races geographically. Also, the matter of adapting for the end effects associated with global warming is becoming paramount. Events associated with coastal regions now include the matter of adapting for the results of global warming, including potential damage from a rise in sea levels, flooding, heatwaves and other related environmental hazards. It does not appear within the research a set amount is dedicated within the planning process for adapting for the effects associated with global warming. It may be hypothesized, through the IOC's planning process for sustainability, they advocate within their planning for adapting for the effects associated with global warming.

Insights gained from comparative analyses of coastal sport tourism confirm that the move to sustainable practice involves pragmatic applications of practice, greater localized engagement and better monitoring and reporting. Evidence for coastal Portugal reflects sustained, although perhaps uneven, adoption of sustainable practices to limit leakages and build greater supplier engagement in coastal areas (Carneiro et al., 2016). The Goa site analysis reveals similar promising developments, which

are likely to require formalizing environmental metrics (waste and emissions) and stakeholder engagement, in addition to weaving cooperation among stakeholders as a sustained governance practice (Venugopalan, 2021). International best practice from island backgrounds can further shape practical design considerations for coastal arenas (Cabildo of Lanzarote, 2025).

One key issue that has emerged again and again is that of sustainability as a continuous process of adaptation and improvement. To achieve sustainability in each edition, there needs to be a continuous process of monitoring, transparency and the ability to adapt to change every year, in line with global sport sustainability best practice (Ironman Group, 2016). Methodologies for the measurement of carbon footprint, applied in the context of triathlon sport governance, can offer key pointers for establishing an adaptive process of continuous monitoring and reporting aiming for improvement (One Carbon World, 2025). With each edition being an opportunity for continuous learning, documenting data for waste amounts, diversion, stakeholder reaction and mitigation performance can contribute to an adaptive management process with better legitimacy in the long term (Melenez-Roman & Font, 2026).

In summary, the case of Goa, it is possible to see both the opportunities and challenges involved in combining endurance sports and sustainability principles in a coastal area. The finding are consistent with those of the literature review: collaboration, limits, empowerment and learning are all crucial. As coastal areas begin to consider the hosting of events of this kind, the example of Goa, where a balance of all these aspects is reached, could provide a significant case study, showing that it is possible, with dedication and imagination, to couple the passion of endurance sports with the principles of sustainable development.

Conclusion

The Goa experience of organizing Ironman 70.3 triathlon races is one such example of the challenges and opportunities of conducting sustainable sports events in coastal destinations. Taking all of these factors together, this study concludes that Goa is suitable for such activities, given that these activities are designed and conducted in such a manner that their focus is on sustainability. Goa is endowed with quite attractive tourist destinations and the government is quite supportive of organizing such activities in the state. The experience in conducting sports activities is gradually being gained in Goa as well.

Based on the above-discussed findings and analysis, certain recommendations are made to improve the focus on sustainable practices in sports activities, such as:

- Integrate a sustainable events plan: It should include the development and implementation of a comprehensive sustainability plan for managing events and should comprise the following:
- It should lay down the goals and objectives related to the targeted waste diversion rate, emission standards and adherence by the suppliers (International Olympic Committee, 2024).
- The benefits related to sustainability reporting and mainstreaming the data and analysis on a yearly basis to measure improvement and enhance the sustainability performance and standards (One Carbon World, 2024, 2025).
- Maximize Local Economic and Social Benefits: For the event to positively benefit the local community, the developers and the government need to focus on local sourcing, enterprise linkages (food, transport, logistics, accommodation and event services) and retain the benefits locally by reinvesting in the community to create long-lasting effects (Peric et al., 2019). This allows the money to circulate within the local economy and also aids in increasing community acceptance (Ma et al., 2023).
- Enhance collaboration and governance among stakeholders: The creation of a multi-stakeholder collaborative mechanism, whether it involves the sports sector, tourist boards, environmental departments, local administrations, sports organizations, or a representation of the local community, can help in goal integration and the enforcement of coastal regulations to promote risk management and transparency (International Olympic Committee, 2021). This can also enhance understanding, legitimacy and collaboration with a view to cooperative innovation in sustainable tourism practices (Van Ninh & Van Tam, 2026).
- Seize the opportunity for long-term sustainability projects: Instead of treating the Ironman 70.3 as a standalone event, Goa can find ways to link the event for long-term sustainability initiatives. For instance, the Ironman 70.3 can be used as the launching pad for beach cleaning initiatives and/or develop cycling facilities for the residents when the cycling routes used for the Ironman 70.3 competition can be utilized. Tie-in initiatives for the "Swachh Bharat" movement and the "Fit India" campaign, among other initiatives, can be achieved through the Ironman 70.3 competition.

To summarise, a cautious and optimistic conclusion comes from analyzing the viability of hosting an Ironman 70.3 event in a sustainable way in Goa. A state that has all the right elements in its favor and has been proactive about sports tourism and sustainability in all its activities in Goa. At the end of this journey and analysis, the importance of indigenous adaptations in non-traditional environments and

qualitatively balancing developmental needs and natural resource conservation has been established as a set of guidelines that apply to all areas in a coastal environment looking towards leveraging adventure sports in a way that benefits their environment and population without breaking them.

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