

## Chapter 6

# Potential of Heritage Site Development Applying Circular Economy Model at Hampi, India

\* Rohini Maligi, Deepa Mane, Anita Yammiyavar

### Introduction

Hampi has been honoured to be a UNESCO World Heritage Site due to its vast geographical scale, architectural marvels, and rich cultural heritage. (UNESCO) The medieval capital of the Vijayanagar kingdom was once a hub of economic prosperity for over two hundred and fifty years due to the growth of agriculture, industry, trade, and commerce, with its opulence and splendour often compared to that of Rome. (Kaminsky & Long, 2016) The remnants of this grandeur can still be witnessed today in the charming bazaars of the ruins. Despite the ravages of time, Hampi has managed to preserve its living cultural heritage amid development pressures. Hampi World Heritage Area Management Authority has implemented various measures to develop the heritage site, emphasizing the economic importance of Hampi. The economic goals are prioritized over social and cultural ones. The change in development measures has profoundly affected local communities' potential to contribute to rural and local economies. The transformations in their livelihoods and the intricate and profound connections can significantly influence and shape sustainable development in the Hampi World Heritage Site. (Master Plan, 2021; Rajangam, 2018).

Three main economic factors are agriculture, tourism, and pilgrimage in the Hampi World Heritage Site. These sectors support the local economy, create jobs, and draw tourists from across the globe who come to enjoy the region's rich natural and cultural history. Spatial planning techniques for sustainable heritage development at Hampi challenge the region's local planning. It is necessary to solve the deficiencies of the present development methods in spatial planning to support Sustainable Heritage Development; the study aims to investigate how the circular economy model may be used for heritage site development in Hampi.

### Literature Review

Hampi is a unique world heritage site with multiple cultural and economic value dimensions and a high growth potential. The circular economy concept can be an effective tool for promoting sustainable development in Hampi. Numerous conceptual interpretations of circular economy and sustainability can be found in the literature. It is a sustainable strategy to improve social, environmental, and economic benefits that can help mitigate the use of natural resources and waste elimination, as well as increase the life span of products. (Kirchherr, Reike, & Hekkert, 2017). The CE concept shifts from the traditional linear concept of the take-use dispose model to the cyclic concept that various stakeholders usually employ (Ellen MacArthur Foundation, 2012). Many authors primarily emphasize the environmental benefits of the Circular Economy, often neglecting the broader aspects of sustainability. Circular Economy is a beneficial condition for sustainability, with appropriate subset relationships to maintain diversity. (Geissdoerfer et al., 2017)) Murray et al. propose revising the Circular Economy definition as an economic framework to maximize ecosystem functioning and human well-being, as the Circular economy neglects the social dimension inherent in sustainable development (Murray et al., 2017). Khajuria et al. summarise Circular Economy as the sustainable management of resources by establishing a closed-loop system and reducing the use of natural resources by reusing, recycling, refurbishing, sharing, and remanufacturing materials (Khajuria et al., 2022). Montellanno

---

Corresponding Author: \* Rohini Maligi

School of Architecture, Associate Professor, K.L.E. Technological University, Hubli, India

e-mail: rohinikarmari@kletech.ac.in

### How to Cite This Chapter:

Maligi, R., Mane, D., & Yammiyavar, A. (2024). Potential of Heritage Site Development Applying Circular Economy Model at Hampi, India. In Baghel, A., & Parikh, S. (Eds.), *Advancing Heritage Innovations in India*, (pp. 55-63), CiniusYayınları.

DOI: <https://doi.org/10.38027/N6ICCAUA2024IN0344>

et al. identify the pathways to help practitioners and policymakers evaluate the contributions of Circular economy strategies for Sustainable development to maximize the use of the Circular economy model as a transitional tool for practitioners and policymakers (Montellano et al., 2023).

Foster emphasizes the adaptive reuse of Cultural heritage buildings as a means of sustainability by refurbishing and repurposing strategies. Foster asserts that each cultural heritage building and its adaptive reuse are distinct and rooted in specific locations and communities, which implies that there can be no one universal solution (Foster, 2020). Foster and Kreinin identify the gap between Indicators of circularity and the adaptive reuse of Cultural Heritage buildings and highlight the gaps between policies and practice (Foster & Kreinin, 2020).

The Circular Economy is a sustainable development strategy that operates at micro, meso, and macro levels and can be adopted in the adaptive reuse of Cultural Heritage buildings, landscape regeneration, governance, and sustainable tourism. (Girard & Gravagnuolo, 2017; Nocca, 2022). Transitioning to a circular economy is not merely about changing one particular activity; it requires comprehensive systemic changes in various domains, including adopting sustainable energy and water conservation practices, waste reduction and recycling, and using renewable resources. (Grdic, Nizic, Rudan 2020).

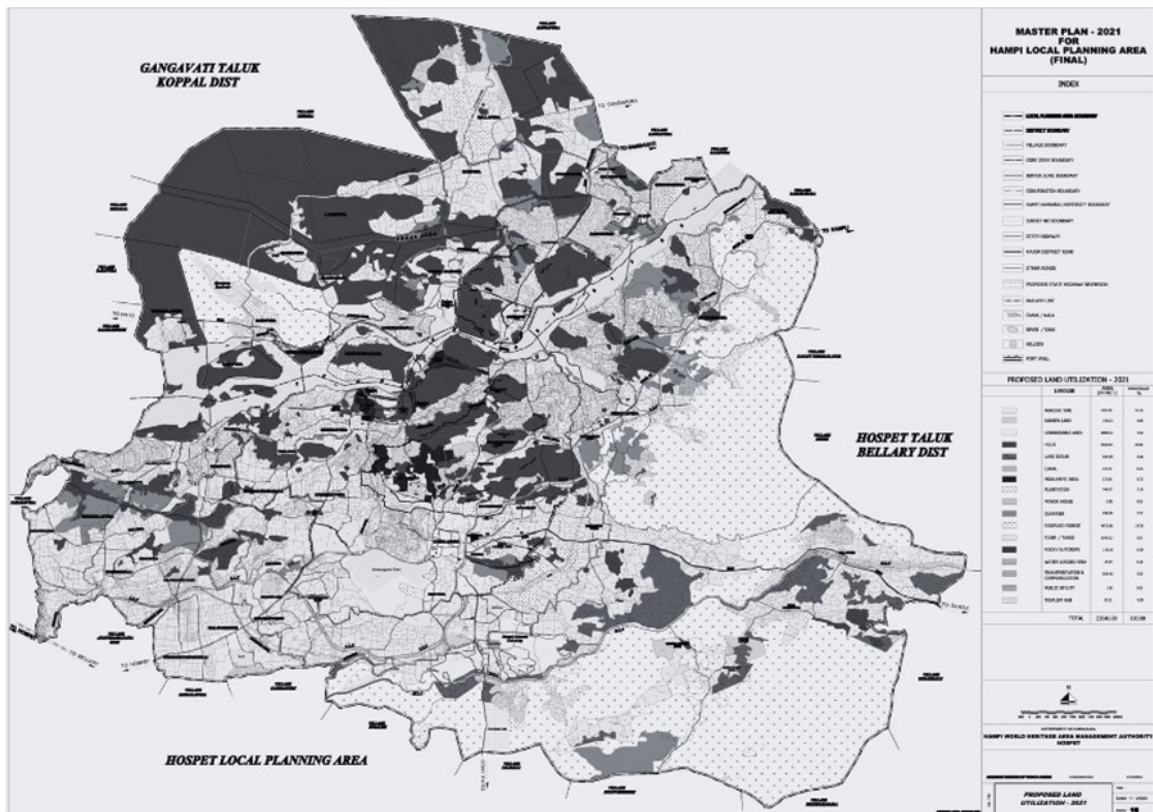


**Figure 1.** Group of Monuments at Hampi, India  
(<https://whc.unesco.org/en/documents/109363>)

## Aims and Objectives

Hampi's designated World Heritage Site is 236.46Sqkm, comprising 29 revenue villages. The Integrated Management plan of Hampi consists of a Core Zone of 41.8Sqkm with eight villages, a Buffer Zone of 19.45Sqkm and Peripheral Zone of 175.21Sqkm. River Tungabhadra divides the site, with 172Sqkm of the area towards the South and 64Sqkm towards the north (Figure 3). Hampi has multilayered dimensions consisting of natural landscapes, mythology, architectural heritage, and living communities. The major component of the site area is agricultural, with 33%, followed by 20% of the rugged landscape of hills. The





**Figure 3.** Proposed Land Utilization 2021 (Master Plan 2021 (Final) for Hampi local Planning Area Report) The Heritage site has one of the most extensive commercial banana plantations in the region, with bananas exported to neighbouring states. The government of Karnataka envisions respectable income and livelihood for farmers and suggests strengthening agro-processing industries for value addition through a special investment drive. (Karnataka agriculture & rural development vision, 2020)

### **Tourism**

Due to unplanned growth, tourism in the Hampi World Heritage site currently needs to be a more organized sector. The Ministry of Tourism launches various schemes to develop tourist infrastructure integrating principles of high tourist value, competitiveness, and sustainability to enrich the tourist experience and enhance employment opportunities. The tourism schemes cover basic visitor facilities in monuments and heritage sites and suggest the adaptive reuse of monuments wherever possible (NITI Aayog). Hampi comprises 56 protected monuments with five historical canals and associated water systems, fortifications, and historic pathways along with natural landscape and intangible heritage spread over 25Sqkm of area. The palaces, temples, baths, markets, aqueducts, pavilions, and stables do not facilitate the adaptive reuse of monuments (Master Plan, NITI Aayog). Rural tourism has a high potential to stimulate local economic growth and social change, creating new job and business opportunities and revitalizing local arts and crafts. A community-based tourism strategy can cater to the needs of the locals and the visitors.

### **Pilgrimage**

The sacred centre of Hampi, comprising the Virupaksha temple, is one of the main living temples in the heritage site and attracts a large number of visitors throughout the year. A week-long Hampi Jatra (Car festival) of Virupaksha temple celebrated in March or April every year is an expression of livingness and intangibility. The excavation of bazaars in front of the Virupaksha Temple by ASI in 2016, UNESCO's favoured policy of advocating tourism, has alienated the local communities rather than empowering them.

### **Part B: Prospects for Sustainable Heritage Site Development**

Part B of the study, the primary survey to explore the possibilities of implementing the Circular Economy concept, was framed as a closed-ended questionnaire of 24 questions. One question was open-ended to collect the suggestions by respondents on preferable economic activities in the Hampi World Heritage site. The survey was conducted through an online Google form and physically collecting the responses in physical form from the respondents residing in the revenue villages of Hampi World Heritage Site. The questionnaire was framed in two languages, English and Kannada. Some respondents preferred to respond in Kannada, being their native language, and did not understand English. The random sample size of the respondents was

37. They are stakeholders in the heritage site development, and all the respondents are residents of the Hampi region who are well aware of all the discourses on the World Heritage Site. They are categorized into four larger groups: the first group consists of policymakers, planners, and bureaucrats; the second group comprises people related to the tourism industry, job holders, guides, and tourists; the third group belongs to the hotel industry, investors, corporate sector, and mining industry. The last group comprises the larger population: farmers, people associated with temple activities, daily workers, and service providers. The willing respondents were informed about their rights and assured of privacy protection of their personal data before obtaining their consent.

## Results and Inferences

The questionnaire for the primary survey was framed to investigate the scope of sustainable development at the site level, to identify the scope of circular economy strategies in three economic sectors: agriculture, tourism, and pilgrimage, and possible considerations for Sustainable Heritage Site Development.

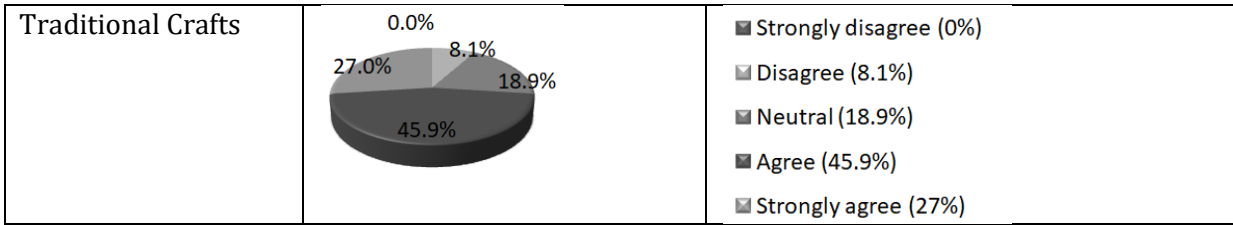
### *Scope of sustainable development at the Hampi World Heritage Site*

At the heritage site level, the indicators identified for sustainable development are economic development, a potential component of the heritage site, the activity of attraction for visitors to the heritage site, economic benefit for communities, stability of communities, and traditional crafts as a livelihood (Ramchurjee & Suresha, 2015).

**Table1:** Sustainable Development Parameters (Developed by Author)

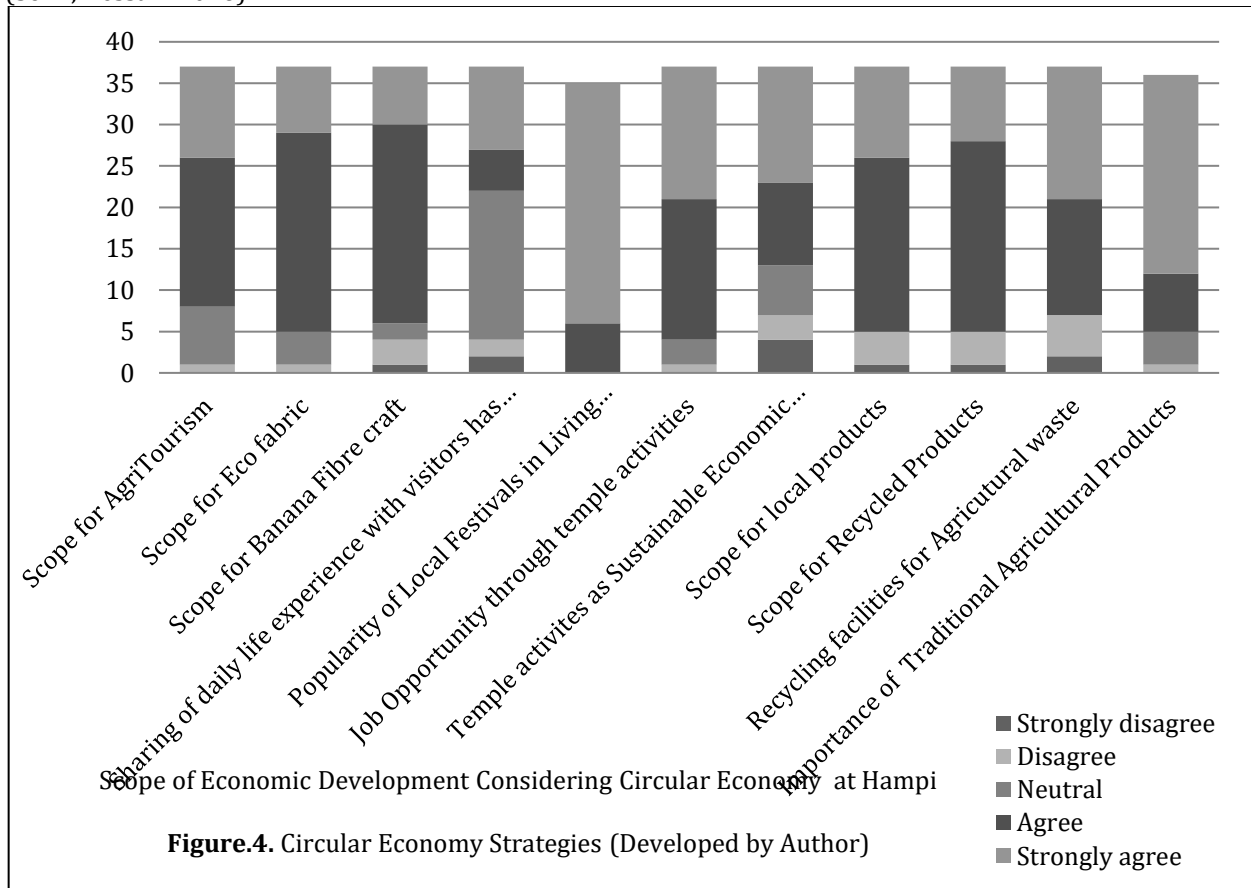
Parameters	Responses	
Economic development		<ul style="list-style-type: none"> <li>■ Agriculture (86.5%)</li> <li>■ Tourism (10.8%)</li> <li>■ Pilgrimage (2.7%)</li> </ul>
Potential component		<ul style="list-style-type: none"> <li>■ Architectural monuments (67.6%)</li> <li>■ Agricultural fields (0%)</li> <li>■ Natural landscape , river, hills (24.3%)</li> <li>■ Living communities and their daily activities (5.46%)</li> <li>■ Temple and festivals (2.7%)</li> </ul>
Activity of Attraction		<ul style="list-style-type: none"> <li>■ Hands on Farm activities (2.7%)</li> <li>■ Temple and village sightseeing (32.4%)</li> <li>■ Home stay (2.7%)</li> <li>■ Agriculture tail trekking (2.7%)</li> <li>■ Festival participation (0%)</li> <li>■ Heritage sight seeing (59.5%)</li> </ul>
Economic Benefit		<ul style="list-style-type: none"> <li>■ Hands on Farm activities (2.7%)</li> <li>■ Temple and village sightseeing (24.3%)</li> <li>■ Home stay (27.0%)</li> <li>■ Agriculture tail trekking (8.1%)</li> <li>■ Festival participation (0%)</li> <li>■ Heritage sight seeing (21.6%)</li> <li>■ Other activities (5.4%)</li> </ul>
Stability of Communities		<ul style="list-style-type: none"> <li>■ Agriculture (5.4%)</li> <li>■ Tourism (75.7%)</li> <li>■ Pilgrimage (18.9%)</li> </ul>



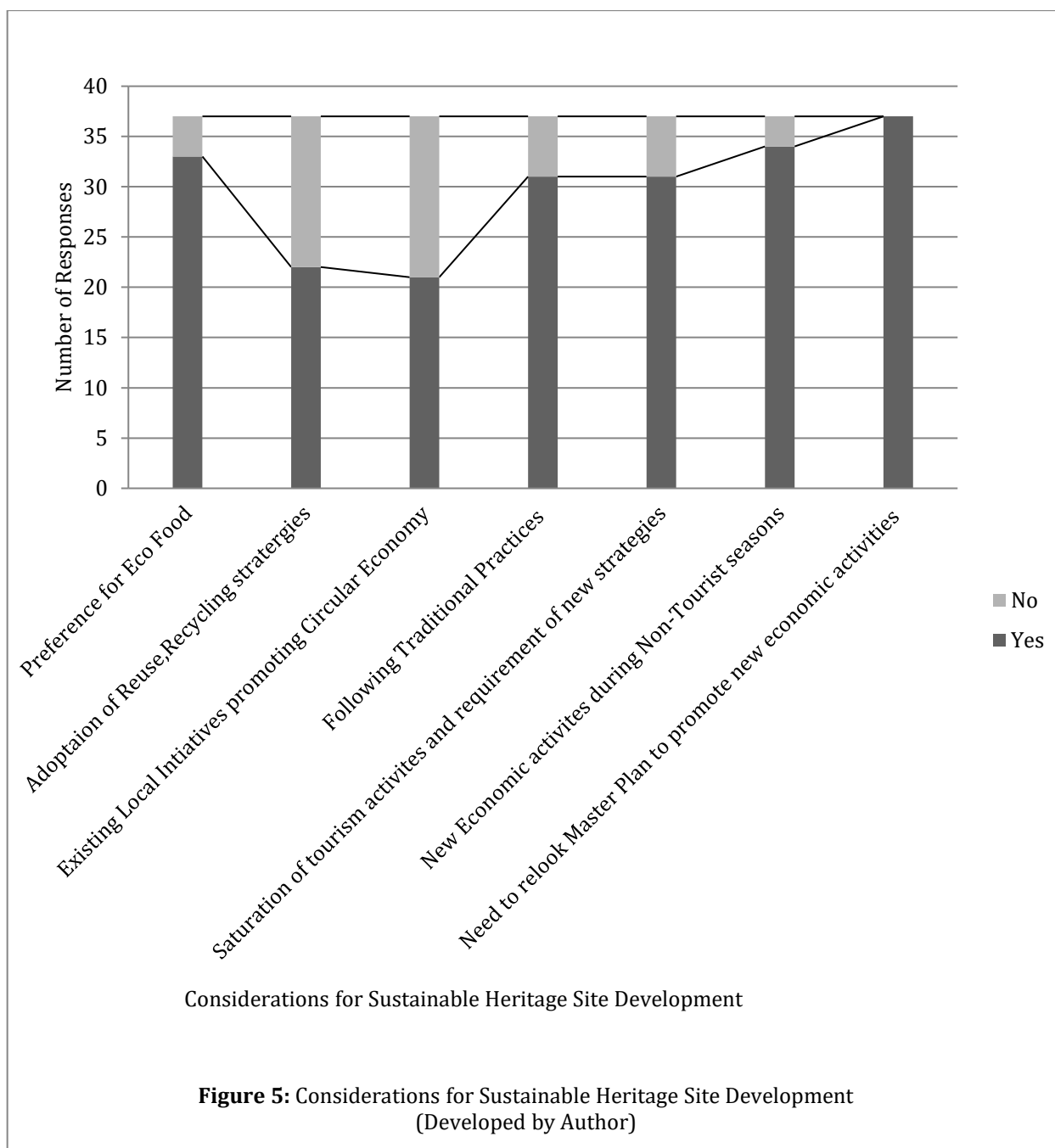


1. Economic development: It is observed that the tourism sector can be encouraged to be a sustainable economy, although 75% of the local population is involved in the agriculture sector. (Rateesh et al. 2018)
2. Potential component: The architectural heritage and the natural Settings of the site are the major components of Hampi that fascinate the population and encourage the development of Tourism.
3. Activity of attraction: Heritage and sightseeing is an activity of interest, followed by pilgrimage.
4. Economic benefit: Homestay facilities, temple, and village sightseeing can be encouraged to generate economic benefits for local communities
5. Stability of Communities: Results show that developing the Tourism sector can bring economic stability to the local communities in Hampi
6. Traditional Crafts: It is observed that there is a scope for reviving traditional crafts of local communities by setting up small-scale or cottage industries.

From the above observations of all parameters from Table 1, it can be inferred that Hampi's cultural heritage is considered an integral part of the local communities for sustainable heritage development and can create economic stability for the living communities in Hampi. Cultural Heritage can be viewed as a development resource and means to shape the development process. It is, therefore, necessary to understand the culture in the context of sustainability and how it can be addressed for the economic development of local communities (Soini, Dessain 2016).



**Figure.4.** Circular Economy Strategies (Developed by Author)



### ***Scope of Circular Economy Strategies***

From the responses in Figure 4, the agriculture sector has a potential economy as it is the major component of the Heritage site. Some of the Circular economy possibilities can be implemented through agritourism, dairy products, eco fabric, and eco food that promote environmental consciuousnesses and sustainable living practices, allowing the visitors to appreciate and educate themselves about farming practices. Heritage tourism is a potential income generator. Tourist accommodation and homestay can become an income source for the local communities. The natural setting, the spirit of the place, and the community of cultural traditions contribute to the development of tourism, which can be taken into consideration to create an economy. (Ramchurjee, Suresha, 2015). 80% of the visitors are pilgrims. (Master plan Hampi 2021). Living festivals and rituals linked with pilgrimage and temple can significantly generate jobs for the local community. Local initiatives can include sharing daily life experiences, sightseeing in the village, providing homestay, and visiting local craft centers.

### ***Considerations for Sustainable Heritage Site Development***

The observations from the responses indicate that each of the three economic drivers, agriculture, tourism, and pilgrimage, can be promoted to generate economy. New economic opportunities are needed during nontourist seasons. From a circular economic perspective, agricultural-based economic activities can be encouraged at the Heritage Site for sustainable development.

Responses to the open-ended questions were suggestions to address the planning and implementation issues. Respondents opined that developing a good infrastructure for visitors and local communities, promoting local arts and crafts for local livelihood, and generating more job opportunities. The planning issues to be addressed are the involvement of experts and professionals for Sustainable Heritage development, clarity of responsibilities of different agencies on heritage sites, capacity building, and holistic planning.

## Discussions, Limitations, and Conclusions

Hampi World Heritage Area Management Authority (HWHAMA) has proposed new development plans for relocating the displaced people from four villages, Hampi, Kaddirampura, Anegundi, and Kamalpura, that lie in the core zone of Hampi World Heritage site (Master Plan, 2021). The economy of displaced people is hampered, and the new development plan lacks primary occupation (Patel, 2021). Setting up the Cottage industry or small-scale industry to induce a new economy requires relooking the spatial planning in the Master plan and identifying and demarcating the development zones in the Heritage site. The Master plan of Hampi is prepared to protect the natural and cultural heritage and does not address the development of living Communities. The conservation regulations prescribed by UNESCO and the natural landscape of Hampi create barriers to spatial development to induce the Circular economy model in all three economic sectors: agriculture, tourism, and Pilgrim. From the analysis of the responses, all the sectors, agriculture, pilgrimage, and tourism, have the potential to apply circular economy concepts to the heritage site development of Hampi. There is a need to identify and designate special zones and frameworks to address the barriers to adopting the circular economy model in the heritage site development of Hampi.

This paper is a preliminary study towards an in-depth research undertaking to investigate the scope of implementing Circular Economy principles in a Heritage context that can lead to spatial planning that promotes Sustainable Heritage development. The limitation of the study is that it is a pilot study with a small sample size. No statistical analytical methods are used. A detailed survey and analysis can be developed for future research to understand various attributes and indicators that can influence and contribute to sustainable heritage development.

## Acknowledgement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Conflict of Interests

The author declares no conflict of interest.

## References

- Ellen MacArthur Foundation. (2012). *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition*. Available at. <https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf>.
- Foster, G., (2020). *Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts*. Resources, Conservation and Recycling, Volume 152, January 2020, 104507, <https://doi.org/10.1016/j.resconrec.2019.104507>
- Foster, G., & Kreinin, H. (2020). *A review of environmental impact indicators of cultural heritage buildings: a circular economy perspective*. Environmental research Letters, Volume 15, Number 4. <https://dx.doi.org/10.1088/1748-9326/ab751e>
- Geissdoerfer, M., Savaget, P., Bocken, N.M.P., & Hultink, E.J. (2017). *The Circular Economy – A new sustainability paradigm?* Journal of Cleaner Production, Volume 143, 2017, Pages 757-768, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2016.12.048>.



- Girard, L., Gravagnuolo, A. 2017. *Circular Economy and Cultural Heritage/Landscape regeneration. Circular business, financing and governance models for a competitive Europe*. Circular City and Cultural Heritage Interplay (2017), Volume 17, Number 1. <https://doi.org/10.6092/2284-4732/5472>
- Grdic, Z. Nizic, K. M., & Rudan, E. 2020. *Circular Economy Concept in the Context of Economic Development in EU Countries*. Sustainability 2020, 12(7), 3060; <https://doi.org/10.3390/su12073060>
- Kaminsky A.P. & Long, R.D. (2016). *Nationalism and Imperialism in South and Southeast Asia: Essays Presented to Damodar R.SarDesai*. Taylor & Francis. p. 66. ISBN 978-1-351-99743-0.
- Karnataka Agriculture & Rural Development Vision, 2020, Planning Board, Government of Karnataka, <https://spb.karnataka.gov.in/storage/pdf-files/KarnatakaAgriculture-RuralDevelopmentVision2010.pdf>
- Khajuria, A., Atienza, V A., Chavanich, S. , Henning, W. , Islam, I., Kral, U., Liug, M., Liu,X. , Murthy, I. K., Timothy Oyedotun, D.T., Verma, P., Xu, G., Zeng, X., & Li, J. (2022). *Accelerating circular economy solutions to achieve the 2030 agenda for sustainable development goals*. Circular Economy, Volume 1, Issue 1, 2022, ISSN 2773-1677, <https://doi.org/10.1016/j.cec.2022.100001>
- Kirchherr, J., Reike, D., & Hekkert. M. (2017). *Conceptualizing the circular economy: An analysis of 114 definitions*, Resources, Conservation and Recycling, Volume 127, December 2017, Pages 221-232. <https://doi.org/10.1016/j.resconrec.2017.09.005>
- Master Plan 2021 (Final) for Hampi local Planning Area Report., Hampi World Heritage Area management Authority, Hospet. Available at [hwhama.tpa.gov.in/sites/hwhama.tpa.gov.in/files/MASTER\\_PLAN\\_HAMPI\\_compressed\(1\).pdf](https://hwhama.tpa.gov.in/sites/hwhama.tpa.gov.in/files/MASTER_PLAN_HAMPI_compressed(1).pdf)
- Murray, A. , Skene, K., & Haynes, K. (2017). *The Circular Economy: An Interdisciplinary Exploration of the Concept and Application in a Global Context*. Journal of Business Ethics. <https://doi.org/10.1007/s10551-015-2693-2>
- NITI Aayog, Government of India, Working Group report on Improving Heritage Management in India 2020. Available at: <https://www.niti.gov.in/sites/default/files/2020-06/Improving-HeritageManagement-in-India.pdf>
- Nocca, F., Toro, P., & Voysekhovska, V. (2021). *Circular economy and cultural heritage conservation: a proposal for integrating Level(s) evaluation tool*. <https://doi.org/10.36253/aestim-10119>
- Ortiz-de-Montellano, C G., Samani, P., & Yvonne van der Meer. (2023). *How can the circular economy support the advancement of the Sustainable Development Goals (SDGs)? A comprehensive analysis*. Sustainable Production and Consumption, Volume 40, 2023, Pages 352-362, ISSN 2352-5509, <https://doi.org/10.1016/j.spc.2023.07.003>.
- Patel, S : 2021 , Economy induced resettlement: Design proposal for new Hampi. DOI: 10.13140/RG.2.2.15390.46404
- Rajangam, K. (2018). *Constructing heritage, shaping tourism: Festivals and local heritage governance at Hampi World Heritage Site, Karnataka, India*. Book Chapter: C.Palmer and J.Tivers (eds) Creating Heritage for Tourism, Publisher: Routledge [https://www.researchgate.net/publication/328529147\\_Constructing\\_heritage\\_shaping\\_tourism\\_Festivals\\_and\\_local\\_heritage\\_governance\\_at\\_Hampi\\_World\\_Heritage\\_Site\\_Karnataka\\_India/citations](https://www.researchgate.net/publication/328529147_Constructing_heritage_shaping_tourism_Festivals_and_local_heritage_governance_at_Hampi_World_Heritage_Site_Karnataka_India/citations)
- Ramchurjee, N & Suresha, S.. (2015). *Hampi: an investigation of tourists' motivation, activities and performance of the destination*. Journal of Kashmir for Tourism and Catering Technology. 1. 24-36.
- Retheesh. P. T, Varghese, B., & Sagar, R. (2018). *A study on the challenges of community involvement in tourism with special reference to socio-economic aspects at Hampi*. JETIR, September 2018, Volume 5, Issue 9 ISSN-2349-5162 [jetir.org/papers/JETIRA006362.pdf](http://jetir.org/papers/JETIRA006362.pdf)
- Rodríguez, C., Florido, C., & Jacob, M. *Circular Economy Contributions to the Tourism Sector: A Critical Literature Review*. Sustainability 2020, 12, 4338. <https://doi.org/10.3390/su12114338>
- Soini, K., Dessen, J. (2016). *Culture-Sustainability Relation: Towards a Conceptual Framework*. Sustainability. 2016; 8(2):167. <https://doi.org/10.3390/su8020167>
- UNESCO World Heritage Centre, Group of Monuments at Hampi <https://whc.unesco.org/en/list/24/>