



ROLE OF TEMPLE PONDS IN WATER AND BIODIVERSITY CONSERVATION IN DAKSHINA KANNADA DISTRICT, KARNATAKA

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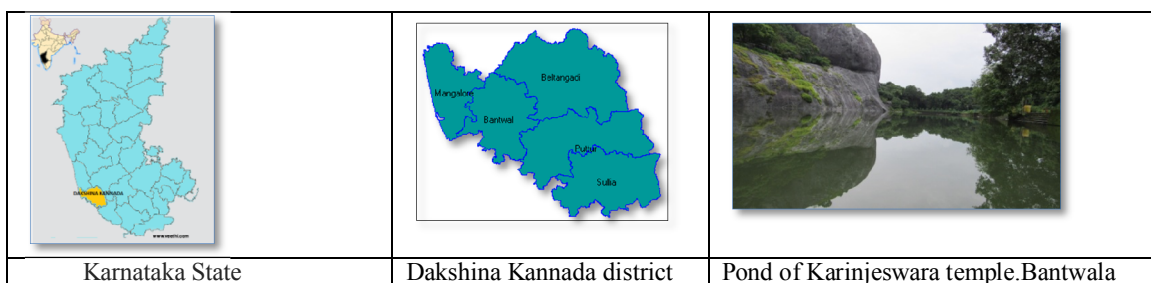
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Abstract– Temple ponds serve as grounds for social and cultural interactions for the local residents. Since the water from the temple ponds was not extracted for everyday uses, they served the vital purpose of recharging the underground water. Most of these sacred tanks supported varied flora and fauna especially fish. The objective of the present work is to know the status of the water ecosystem and also to provide the information regarding the conservation of temple ponds to concerned authorities. The study was carried out at different seasons, both during summer and rainy seasons in the year 2016. Data was collected on the availability of water and biodiversity in different seasons. A survey of more than 33 temple ponds in Dakshina Kannada revealed that 24 temple ponds have water up to the usage condition and 3 temple ponds have water in unusable condition during summer season and three ponds also having macrophytes. 6 temple ponds have dried out completely during summer season. The restoration of the pond will be of immense benefit to the public, especially during summer. The concerned administrative bodies, panchayats and temple authorities will be responsible for maintaining the temple ponds by involving the public.

INTRODUCTION

Temple ponds or pushkarinis or kalyanis are the water reservoirs built as part of the temple complex

METHOD



Dakshina Kannada is a coastal district in the state of Karnataka in India. Sheltered by the Western Ghats on the east and surrounded by the Arabian sea on the west. Dakshina Kannada receives abundant rainfall (average 4200 mm) during the monsoon. The study was carried out at different

near Indian temples. Temple ponds serve as grounds for social and cultural interactions for the local residents. Since the water from the temple tanks was not extracted for everyday uses, they served the vital purpose of recharging the underground water. They reduce the runoff water and enhance the water stagnation time, which ensures sufficient water in the domestic wells during the summer months. Most of the temple tanks having perennial water source help to keep the surroundings moist and cool. Most of these sacred tanks supported varied flora and fauna especially fish, which helped maintain the tank by eating moss and algae which would otherwise turn the water dirty. Though the sacred groves of Dakshina Kannada have been subjected to detailed investigations the temple ponds have been least studied structures. The present work enumerates some of the most important significance values of temple ponds of Dakshina Kannada. The objective of the present work to know the status of the water ecosystem and also to provide the information regarding the conservation of temple ponds to concerned authorities. The present study reveals the multitudinous roles of temple ponds in Dakshina Kannada district, Karnataka.

seasons in the year 2016. Data are collected on the availability of water and biodiversity of the temple ponds both during rainy and summer seasons. Interviews with the local people were conducted to gather information on the importance of the tanks in regard to their utilization and conservation aspects.



Lake 2016: Conference on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats [THE 10TH BIENNIAL LAKE CONFERENCE]

Date: 28-30th December 2016, <http://ces.iisc.ernet.in/energy>

Venue: V.S. Acharya Auditorium, Alva's Education Foundation, Sundari Ananda Alva Campus, Vidyagiri, Moodbidri, D.K. Dist., Karnataka, India – 574227

RESULT

A survey of 33 temple ponds of Dakshina Kannada district revealed that they are the important source of water and rare biodiversity. 24 temple ponds have water up to the usage level during summer season and three ponds having little water in unusable condition. Three ponds having macrophytes during summer season. 6 temple ponds (Table-1) were dry completely during summer season. The flora of the ponds includes macrophytes mainly lotus and water Lilly and microphytes like green macroscopic algae (Panchalingshwara temple Vitla) and microscopic algae. Some ponds which dry up during summer also harbour a variety of annuals during the summer season (Ammembala somantha Koornadu). Some of the ponds (Janardhana temple Kodippadi) have been used as holy bathing pool by the local communities of people since ancient times, usually a separate

bathing ghat being reserved for the priest of the temple. This pond is said to cure various skin diseases when bathed in it. Thus temple ponds structures serve as grounds for social and cultural interactions for the local residents. Most of the temple ponds have perennial water source help to keep the surroundings moist and cool and harbor dense and varied flora. These tanks with their moist cool banks are the habitats for different species of angiosperms (*Bauhinia tomentosa*, *Thevetia peruviana*, *Caesalpinia pulcherrima*, *Ervatamia divaricata*, *Aegle marmelos*, *Piper nigrum*, *Tinospora cordifolia*, *Butea monosperma*, *Dichrostachys cinerea* etc.), ferns, fern allies, bryophytes, mushrooms, medicinal herbs and many grass species, The flora found in and around the temple ponds support various animals including visiting birds and butterflies, fishes, frogs etc.

Table-1. Water levels of the temple ponds of Dakshina Kannada during rainy and summer seasons

Sl No.	NAME OF THE TEMPLES	WATER CONDITION			
		R	S*	S**	D
1	Adiparashakthi Narasimha Temple, Beedinamajalu	✓			✓
2	Anantheswara Temple, Vitla	✓			✓
3	Annapurneshwari Temple, Kokkada	✓	✓		
4	Basaveshwara Devasthanana, Kulkunda	✓	✓		
5	Devara aramane, Madyar	✓	✓		
6	Durgameshwari Temple, Sharavooru	✓	✓		
7	Gopalakrishna Temple Manchi	✓	✓		
8	Gopkarnanatheshwara Temple, Kudroli	✓	✓		
9	Janardhana Temple, Kodippadi	✓	✓		
10	Jatadhari Kere, Vitla	✓			✓
11	Karinjeshwara Devasthanana, Karinja -1 (at the top)	✓	✓		
12	Karinjeshwara Devasthanana, Karinja-2 (at the base)	✓	✓		
13	Laxminarasimha Temple, Kotraguttu, Amblamogaru	✓	✓		
14	Mahaganapathi Temple, Sharavu Mangalore	✓	✓		
15	Mahalingeshwara Temple, Tumbe	✓	✓		
16	Mahalingeshwara Temple, Puttur	✓	✓		
17	Manjunatheshwara Temple, Dharmasthala	✓	✓		
18	Manjunatheshwara Temple, Kadri	✓	✓		
19	Narahari Parvatha 1.Shankha Theertha Kalladka	✓	✓		
20	Narahari Parvatha 2. Gada Theertha Kalladka	✓	✓		
21	Narahari Parvatha 3. Padma Theertha Kalladka	✓	✓		
22	Narahari Parvatha 4. Chakra theertha Kalladka	✓	✓		
23	Panchalingshwara Devasthanana, Ishwaramangala	✓		✓	
24	Panchalingshwar Temple, Vitla	✓		✓	
25	Sadashiva Devasthanana ,Salethuru	✓	✓		
26	Shri Durgapameshwari Temple, Monthimaru	✓			✓
27	Shri Mahalingeshwara Temple, Bellippadi	✓			✓



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28	Shri Parashakthi Temple, Madyar	✓	✓		
29	Shri Somanatheshwara Temple , Ammembala Koornadu	✓			✓
30	Somanatheshwara Temple, Ira	✓	✓		
31	Umashiva Kshethra, Kalladka	✓	✓		
32	Vishnumurthi Temple, Mankude	✓			✓
33	Sadashiva temple. Surya	✓	✓		

R= Pure water during rainy season

S*= Usable water during summer season

S**= Unusable water during summer season

D = Completely dry condition during summer season

Table-2. Flora and Fauna found in the temple ponds of Dakshina Kannada District

SI No.	NAME OF THE TEMPLE	FLORA				FAUNA			
		R		S		R		S	
		Micro	Macro	Micro	Macro	Fishes	Others	Fishes	Others
1	Adiparashakthi Narasimha Temple Beedinamajalu	✓	✓		*	3	c,d,e,f		
2	Ananthapadmanabha Temple Vitla	✓					d		
3	Annapurneshwari Temple Kokkada	✓		✓		1,2,3,4,6	c,d,e	1,2,3,4,6	c,d,e
4	Basaveshwara Devasthana Kulkunda	✓	✓	✓					
5	Devara aramane Madyar	✓		✓			c		
6	Durgameshwari Temple Sharavooru	✓		✓					
7	Gopalakrishna Temple Manchi	✓		✓	*	1,2,3,4,5,6	c,d,e,f,g	1,2,3,4,5,6	c,d,e,f,g
8	Gopkarnatheshwara Temple Kudroli					1,2,3,6,7	c,d	1,2,3,6,7	c,d
9	Janardhana Temple Kodippadi	✓	✓	✓	✓	1,2,3	c,d,e	1,2,3	c,d,e
10	Jatadhari Kere Vitla	✓	✓		*	3	c,d,f		
11	Karinjeshwara Devasthana 2. Small (✓		✓			c		c
12	Karinjeshwara Devasthana, Karinja.	✓		✓		1,2,3,4,5	c,d,e,f,g	1,2,3,4,5	c,d,e,f,g
13	Laxminarasimha Temple Amblamogaru	✓	✓		*	3	c,d,e,f		c,d,e,f
14	Mahaganapathi Temple Sharavu Mangalore	✓	✓	✓	✓	2,7	c,e,f	2,7	c,e,f
15	Mahalingeshwara Temple Tumbe	✓	✓	✓		3	c,d,e,f	3	c,d,e,f
16	Mahalingeshwara Temple, Puttur	✓		✓		6,7	b,c,d,e,f	6,7	b,c,d,e,f
17	Manjunatheshwara Temple Dharmasthala	✓		✓		6,7	c,d,e,f	6,7	c,d,e,f
18	Manjunatheshwara Temple Kadri	✓		✓		1,2,3,6,7	c,d,e,f	1,2,3,6,7	c,d,e,f



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19	Narahari Parvatha 1. Shankha Theertha	✓		✓			c,d,e,f		c,d,e,f
20	Narahari Parvatha 2. Gada Theertha Kalladka	✓		✓			c,d,e,f		c,d,e,f
21	Narahari Parvatha 3. Padma Theertha Kalladka	✓		✓			c,d,e,f		c,d,e,f
22	Narahari Parvatha 4. Chakra theertha Kalladka	✓		✓			c,d,e,f		c,d,e,f
23	Panchalingeswara Ishwaramangala	✓		✓		3	c,d,e,f,g	3	c,d,e,f,g
24	Panchalingeswar Temple Vitla	✓		✓	✓	1,2,3,4,5	c,d,e,f	1,2,3,4,5	c,d,e,f
25	Sadashiva Devasthanam Salethuru	✓		✓		1,2,3	b,c,d,e,f	1,2,3	b,c,d,e,f
26	ShriDurgaparameshwari Temple Monthimaru	✓				3	c,d		
27	ShriMahalingeshwara Temple Bellipadi	✓					c,d		
28	Shri Parashakthi Temple Madyar	✓		✓		1,2,3,4,5,6,7	b,c,d,e,f,g,h	1,2,3,4,5,6,7	b,c,d,e,f,g,h
29	ShriSomanatheshwara Temple Ammembala	✓	✓		*		c,d		
30	Somanatheshwara Temple Ira	✓		✓			c,d		
31	Umashiva Kshethra, Kalladka	✓		✓		1,2,3,4	b,c,d,e,g	1,2,3,4	b,c,d,e,g
32	Vishnumurthi Temple Mankude	✓	✓	✓	✓		c,d,c		
33	Sadashivarudra Temple Surya	✓	✓	✓	✓				

R = rainy season S = summer season * = annual terrestrial herbs on damp soil during summer

Fishes: 1. Magur 2. Shark Cat fish 3. Labio 4. Spotted snake head 5. Asiatic snake head 6. Tiger Barb 7. Koi fish 8. Katla

Other animals: a. Crocodile b. Turtle c. Small water frog d. Large frog (Rana) e. Water snake f. Water spider g. Crab h. Duck

CONCLUSION:

The restoration of the pond will be of immense benefit to the public, especially during

summer. The concerned administrative bodies, panchayats and temple authorities will be responsible for maintaining the temple ponds by involving the public. It is also noticed that some of the ponds are polluted and human activities worsen the water further. Significant measures can be adopted to prevent the humans and other animals from polluting these ponds. Unauthorized entry to these ponds must be prohibited.

Plate-1: Water level of the temple ponds of Dakshina Kannada at summer and rainy seasons
















Shri Panchalingeshwara temple. Vitla		Shri Janardhana temple . Kodippadl	
			
Shri Ammembala somantha. Koornadu		Shri Basaveshwara. Kulkunda	
			
Shri Vaidyanatheswara. Kakkada		Shri Durgaparameswari temple. Mittur	
			
Shri Mahalingeshwara. Puttur		Shri Panchalingeshwara. Iswaramangala	
			
Shri Vishnumurthi devasthanana . Mankude		Shri Sadashiva temple. Narahari Betta..	
			

Plate-2: Water level of the temple ponds of Dakshina Kannada at summer and rainy seasons

Shri.Parashakthi temple. Madya		Shri Sadashiva devasthanana.Salethur	
			

<p>Shri somantha Ammembala Koornadu</p> 	<p>Shri Sharavu mahaganapathi. Manglore</p> 
<p>Shri Anantheshwara devasthanana.Vitla</p> 	<p>Shri Mahalingeshwara temple. Tumbe</p> 
<p>Shri Karinjeswara. Karinja</p> 	<p>Shri Sharavu Mahaganapathi. Mangaore</p> 
<p>Shri Narasimha temple Amblamogaru</p> 	<p>Shri Umashiva temple.Geru katte Kalladka</p> 

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