Carrying Capacity Analysis and Destination Development: A Case Study of Gangotri Tourists/Pilgrims Circuit in the Himalaya

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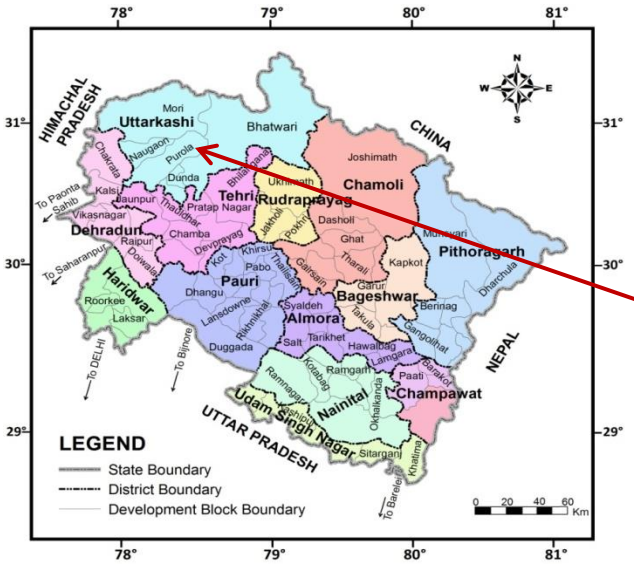
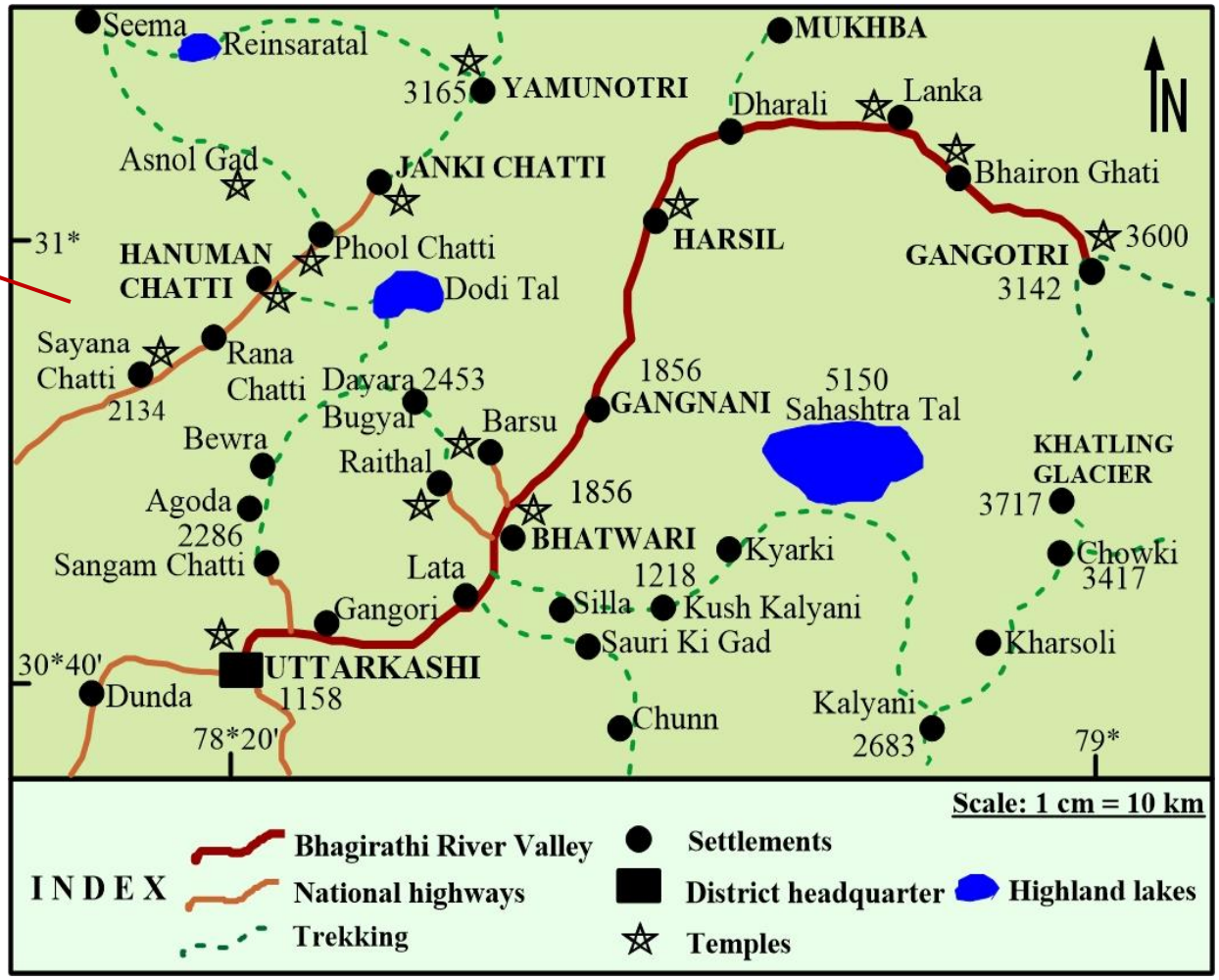
Tourism Characteristics in the Himalaya

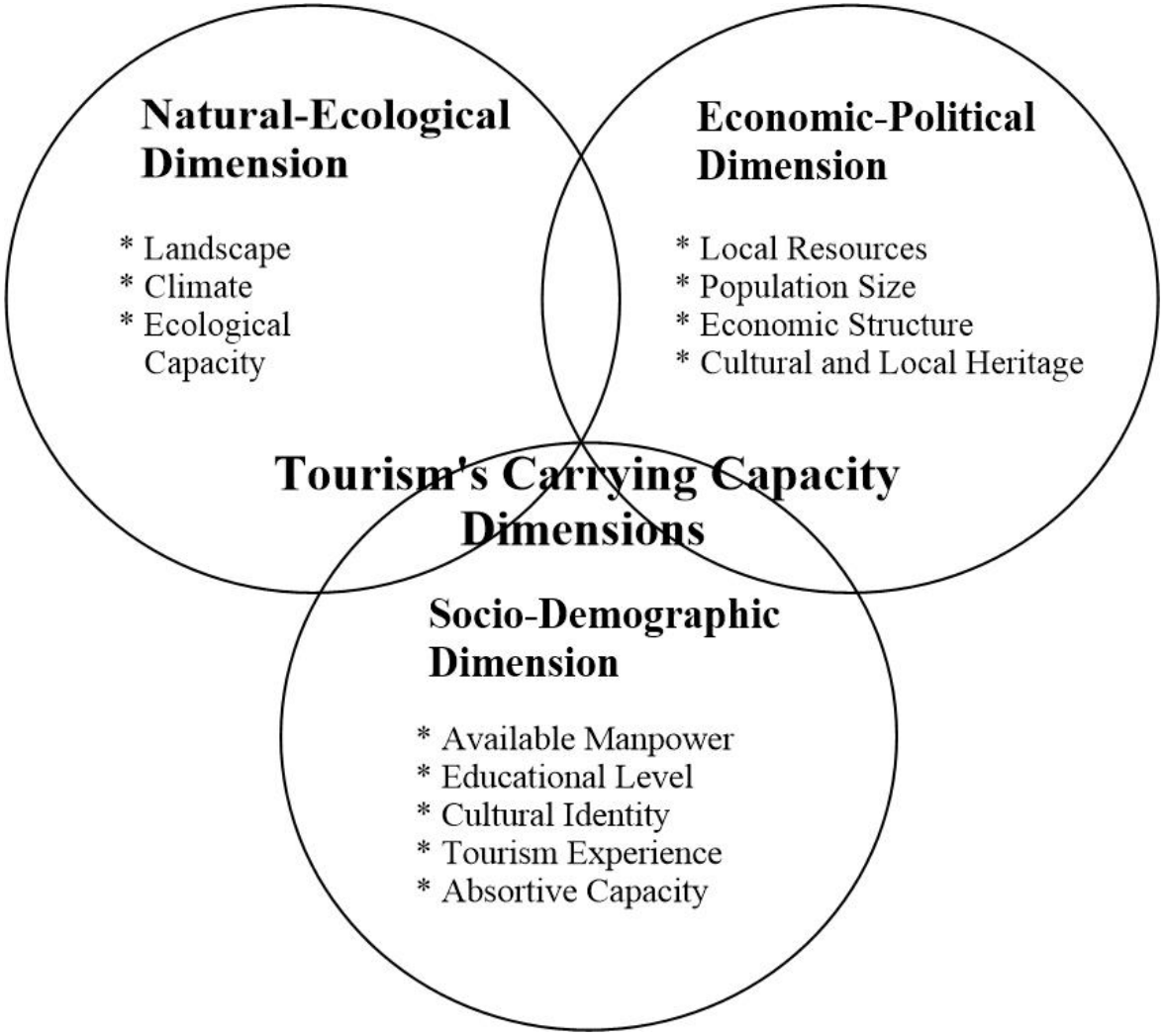
- The Himalaya has high potential for tourism development – natural, pilgrimage and adventurer tourism
- Natural/environmental and cultural carrying capacity of tourist destinations is high
- In the meantime, institutional and infrastructural carrying capacity of these destination is very less
- This presentation looks into carrying capacity and destination development of Gangotri Tourists/pilgrims circuit of the Garhwal Himalaya

Location of Gangotri Tourists/Pilgrims Circuit





Tourism's Carrying Capacity Dimensions



Tourists/Pilgrims Flow (in number)

Place	Foreign	Domestic	Total
Gangotri temple	331	130,973	131,304
Uttarkashi town	309	149,918	150,227
Bhatwari	309	149,918	150,227
Harsil	Nil*	4,912	4,912
Total	949	435,721	436,670

Source: Uttarakhand Tourism Development Board, Dehradun (2016)

Carrying Capacity Analysis of Gangotri Tourists/Pilgrims Circuit

Components	Aspects	Description
Natural-ecological capacity	Positive	Feasible climate; pollution free environment; panoramic landscape – river valley, mid-altitudes, highlands, alpine meadows; and snow clad mountain peaks
	Negative	High fragility and instability; vulnerable to climate induced hazards; frequent flashfloods, landslides, and mass movements; highland degradation; remoteness
Cultural-aesthetic capacity	Positive	Rich culture and cultural heritage; world famous highlands and valley pilgrimages; and richness in fairs and festivals
	Negative	Declining trend in organizing fairs and festivals and cultural erosion
Economic-political capacity	Positive	Revenue generation; employment augmentation; development of urban centres along the river valleys
	Negative	Lacking transportation and parking facilities; less accommodation facilities; bad road condition
Institutional capacity	Positive	Tourists' information centres; providing services to tourists and pilgrims in the major stoppages and tourist/pilgrims destination centres.
	Negative	Lacking publicity, proper information, and trained tourist guides; Lacking maintenance of historical and cultural monuments

Road Network and Trekking in the Study Region

National highways	Trekking
Rishikesh-Uttarkashi-Bhatwari-Harsil-Gangotri: NH 94	Bhojbasa: Gangotri to Bhojbasa 14 km trek
Dharasu-Barkot-Hanumanchatti-Kharsali: NH 108	Dayara bugyal: Bhatwari – Raithal/Barsu by village road and then 7 km trek
Naugaon-Badkot: NH 123	Gaumukh: Gangotri to Gaumukh 18 km trek
	Mukhwa: Harsil to Mukhwa village road

Accommodation Facilities – Private and Public, and Required Accommodation (in beds)

Name of place	Tourism Department	Private	Total	Required
Bhojwasa	129 (6)	2,015 (94)	2,154	4,720 (119)
Ganganani	78 (5)	1,573 (95)	1,651	3,471 (110)
Gangotri	110 (3)	3,112 (97)	3,222	5,127 (59)
Uttarkashi	317 (5)	6,700 (95)	7,027	13,318 (89)
Total	634 (4.5)	13,400 (94.5)	14,054	26,636 (89.5)

Infrastructural Facilities in the Major Tourists/Pilgrims Centres (2017)

Destination	Gangotri	Gomukh	Uttarkashi	Bhatwari	Mukhwa	Harsil	Dayara	Bhojwasa
Road Quality	3	1	3	2	1	1	1	2
Sewerage	1	1	3	2	1	2	1	1
Garbage	1	1	2	1	1	1	1	1
City road	2	-	3	1	-	-	-	-
Drinking water	3	2	3	1	3	3	3	3
Streetlight	1	1	3	2	1	1	-	-
Budget hotel	3	-	4	3	4	4	-	3
Parking	1	-	3	3	1	1	-	-
Tourism information/ guide	1	2	3	2	1	2	2	2
Conservation of heritage sites	3	2	4	3	3	3	2	2
Power supply	1	-	4	4	2	4	-	-
Communication	1	1	4	2	1	3	2	1

Impact of Road Connectivity on Infrastructural Facilities

		Road Connectivity	Sewerage	Garbage	Street Light	Parking	Tourist Information
Road connectivity	Pearson Correlation	1	1.000**	.875	.932*	.875	1.000**
	Sig. (2-tailed)		.000	.052	.021	.052	.000
Sewerage	Pearson Correlation		1	.875	.932*	.875	1.000**
	Sig. (2-tailed)			.052	.021	.052	.000
Garbage	Pearson Correlation			1	.784	.583	.875
	Sig. (2-tailed)				.116	.302	.052
Street light	Pearson Correlation				1	.948*	.932*
	Sig. (2-tailed)					.014	.021
Parking	Pearson Correlation					1	.875
	Sig. (2-tailed)						.052
Tourist information	Pearson Correlation						1
	Sig. (2-tailed)						

Sustainable Destination Development Model

- Signages
- Parking
- Motor Vehicle Repair Centres
- Proper Power Supply
- Extension of Power Lines upto Gangotri
- Proper Transportation:
  Roadways, Ropeways, Airways and Trekking Routes

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Sustainable Destination Development Model

(Gangotri Tourists/Pilgrims Cicuit)

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- Preservation of Cultural and Heritage Sites
- Accommodation and Meal Facilities
- Kiosks for Providing Tourism Information Centres
- Solid Waste Management Plan
- Waste Water Treatment Plant
- Toilet Facilities

Thank you!