

REVIVING HINDON RIVER

A Basin Approach

NOVEMBER, 2017



INTACH

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*Saraswati saryuh sindhurmibhirma ho
maheervasa yantu vakshinth |
Devirapo matarah sudaytnavo
ghravatpayo madhumanno archat ||
-Yajur Veda (X, 64.9)*

Water from wells, rivers, rain, and
from any other source on earth
should be used wisely as it is gift of nature,
for well-being of all.

-Yajur Veda (X, 64.9)



ABOUT INTACH

The Indian National Trust for Art & Cultural Heritage is a national NGO registered under the Societies Act in 1984.

The Secretaries of the Ministries of Environment, Forest and Climate Change, of Urban Development and of Culture are ex-officio members of its Governing Council. The organization is recognised as a Centre of Excellence by Gol and is mandated to preserve and conserve the heritage of India. Headquartered at Delhi, the organization has volunteer chapters in 180 districts of the country. INTACH is organized in Divisions looking after Architectural Heritage, Material Heritage, Natural Heritage, Intangible Cultural Heritage, INTACH Heritage Academy, Heritage Education.

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- Wildlife Outside Protected Area

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Abstract: *Rivers across India are in a crisis. Pollution, encroachment, water abstractions and diversions, are nearly killing the rivers. Characteristics of catchment areas are changing as a consequence of land use and land cover changes affecting overall river ecological systems. While there have been considerable focus on major rivers as a result of media attention and civil society activism, the plight of medium and minor rivers and hundreds of seasonal or ephemeral streams often goes unnoticed. Minimal data and scattered studies do not provide any holistic picture for robust intervention.*

Hindon River, a 350 km long river is dying a slow death due to substantial water abstractions and severe pollution loads it receives from various sources along its course. The condition is manifested in degrading ecological characteristics, contaminated ground and surface water and cultural disconnect with the river.

This study uses the existing data which are mainly regarding water quality and integrates them into a holistic scenario considering basin level features such as the water budget of the basin, the impact of using irrigation water imported from adjacent basins, the widespread cultivation of water guzzling crops such as sugarcane, the near extinction of forest cover in the basin. The holistic scenario yields radically different solutions for conserving the river with field observations, primary investigations and basin level statistics. The basin level conservation plan shows that the health of the river cannot be isolated from the environmental health of the basin. The detailed study is hoped to help plug information gaps and assist in its conservation with the major objective to empower sound decision by govt. and public authorities.

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Acknowledgements

Condition of Rivers in India are continuously on the decline with their significant visible impact on people and environmental health. While there is considerable focus on major rivers as a result of media attention and civil society activism, the plight of medium and minor rivers and often goes unnoticed. Hindon River, one of the most polluted rivers is one such example.

INTACH's Natural Heritage Division felt the need to upgrade the existing studies with field observations and primary investigations and prepare basin level conservation plan. Several individuals gave freely of their time and their support and inputs are acknowledged herewith.

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Manu Bhatnagar
Principal Director
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FOREWORD

Rivers in India are in a crisis. What ails the life giving arteries of our great nation ?

Whilst major rivers are beginning to receive substantial attention, the plight of medium and minor rivers has largely gone unaddressed. Where river conservation is being addressed priority has been given to the directly visible and noticeably harmful aspect of pollution or ensuring *nirmal dhara*.

Many rivers have now been rendered anaemic, especially in the lean season, with several higher order rivers struggling to reach the sea. The far more difficult issue of restoring adequate flows to rivers or unbroken flows or *aviral dhara* has largely been ignored or does not square with the interests of dam building.

There are hardly any river conservation models within the country and the few external models are not relevant to Indian conditions. Moreover, although the National Water Policy has spoken about the need to adopt a basin approach, such holistic planning will take a long time to be implemented with no observable initiatives and certainly, on interstate rivers, does not seem to be on the horizon.

Hindon is a medium river, where for the first time basin level data has been assembled in a narrative which provides a basin level approach to river conservation. The exercise has thrown up interesting issues about data limitations especially historic data. The use of rivers as water transfer canals, upsetting the entire eco-system, has created a situation where they are neither fish nor fowl i.e. neither wholly a river nor wholly a canal.

The implementation of the elements of the basin level approach recommended through this conservation plan are going to be a long drawn and difficult exercise visualized over a time horizon of 15 years even as the climate patterns are in a state dynamic adverse flux. The results would be beneficial to adjacent basins as well.

The small INTACH team engaged in drawing up this document has had its hands full and the effort has only highlighted the arduous energy required to conserve India's several hundred streams and rivers. The document has benefitted by the guiding light of the holistic River Health Assessment methodology developed by the India Rivers Week. As a first attempt of its kind there would be several shortfalls which, we hope, can be remediated in due course with expert advice.

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Table of Contents

Chapter I – Introduction : Requiem For The Rivers	1
Human Interventions and Adverse Impacts on Rivers.....	1
A Snapshot Of The Current Status Of Rivers In India.....	7
Ecosystem Services of Rivers	11
Status Of Rivers Studies In India	14
The Response	15
Chapter II – Understanding Rivers	17
River as an Eco-system.....	34
Ecosystem Services Provided By Rivers	39
River Channelization	40
Rivers and Economics	40
Rivers as Cultural Streams	41
River Interlinking.....	41
Constitutional Provisions	45
Inter Water Disputes.....	48
National Inland Waterways	50
Navigational Depth Requirement for Vessels in Inland Waters	53
Impact of Anthropogenic Noise on Marine Mammals	55
Understanding Minimum Flow in Rivers.....	55
Uninterrupted Flow and Fish Migration	57
Building Block Methodology (BBM).....	58
Indicators for Hydrologic Alteration (IHA) : Software for Understanding Hydrologic Changes in Ecologically-Relevant Terms	60
Living Entity Status of Ganga-Yamuna River	61
Living Entity Status of Whanganui River, New Zealand	61
Flood Forecasting.....	62
River Training	63
Some Relevant Acts	70
Chapter III – The Hindon Basin.....	77
The Hindon River.....	78
Efforts Of Civil Society Organisations.....	88
Hindon Basin In The District Gazetteers	88

History, Mythology and Cultural Sites	90
Administrative Boundaries	94
Population Data	95
Climate	97
Topography of The Basin	105
Soils	108
Groundwater Conditions in The Hindon Basin	113
Hindon River Flow & Discharge.....	117
Tributaries, Escapes & Major Drains [Sequence North to South].....	123
Land Use, Land Cover Types & Change Detection	136
Agriculture and Crops	143
Water Budget Of The Hindon Basin	149
Surface Water Pollution.....	152
Groundwater Pollution	168
Condition Of Flood Plain And Flood Levels.....	169
Interaction With Residents/Resource Persons	171
Some Relevant Economic Aspects Of The Hindon Basin	183
Hindon Rejuvenation Plan by Uttar Pradesh Government.....	184
Chapter IV – Biodiversity In And Along Hindon River	188
Forest Areas of Hindon River Catchment.....	241
Chapter V – Threats & Major Issues	254
Basin Level Factors.....	254
Issues In Saharanpur	256
Issues In Muzaffarnagar	260
Issues In Meerut.....	265
Issues In Baghpat	267
Issues In Ghaziabad.....	268
Issues In Gautam Buddha Nagar.....	280
Chapter VI – River Restoration Case Studies & Approaches.....	283
Arvari River Rejuvenation	283
Kuttemperoor River - How A Village Panchayat Revived a Dying River.....	285
Kali Bein River Restoration, Punjab.....	286
Sasur Khaderi Rivulet Restoration	287

Thames River Restoration, England	288
Segura River Restoration, Spain.....	290
The Murray - Darling Basin, Australia	291
River Basin Management in Europe.....	296
Europe: RESTORE Project.....	296
Sweden: ReMiBar Project	297
Rivers Restoration Work in USA.....	297
France: 'Polluter-User-Pays' And 'Water-Pays-For-Water' Principles.....	298
Germany - Action Plan to Restore Water Courses in Ruhr Basin.....	299
China: IWRM in Mekong River Basin [A Transboundary Basin].....	299
Europe: Guidelines for Urban River Vitalisation	300
Chapter VII – Conservation Plan For The Hindon River	304
Industrial Pollution.....	305
Domestic Wastewater.....	305
Agricultural Pollution	305
Cropping Pattern.....	306
Water Conservation, Water Use Efficiency, Recycling.....	306
Groundwater Extraction	307
Forest Cover	307
River Regulation Zone [RRZ]	310
E - Flow.....	311
Bio-monitoring Plan	313
Annexures	315
Bibliography	485

List of Images

Image 1 : Dams Worsen the Impact of Climate Change on Rivers [Pic: EcoWatch.Com].....	2
Image 2 : Yamuna near Greater Noida. Photo: Arun Kumar/ Governance Now [July 2016].....	4
Image 3 : Sand mining on the banks of the Ken river in Kartal village, Bandha in Uttar Pradesh. (Arun Sharma/HT)	7
Image 4 : A 95 lb (43.09 Kg) humpback mahseer caught from and released into the Cauvery in 2008.[Madhumitha Srinivasan/HT; 06/06/2015]	9
Image 5 : A River Course and its Different Components [Source: Dictionary of Earth,1994]	18

Image 6: Different Stages of a River [Source: The Practical Geologist by Dixon & Raymond]	20
Image 7 : Properties of a River at Different Stages.....	20
Image 8: River Course Diagram.....	22
Image 9: Diagram Highlighting Stream Order [Source: eCode360.com]	25
Image 10 : Some Rivers and Streams Drainage Patterns [Source: CEC, IISc].....	28
Image 11: Aerial View of Ganga-Brahmaputra Delta (Source: Planet Observer/ Getty Images)	30
Image 12: An Aerial View of an Estuary [Source: Wells National Estuarine Research Reserve]	31
Image 13 : Ground Water Zone [Source: The Groundwater Foundation].....	32
Image 14: Rivers Offers Diversity of Microhabitats and Supports Large Amount of Biodiversity on Earth.	34
Image 15: Nutrient Cycling by Benthic Macro-invertebrates in Freshwater Ecosystem	35
Image 16: Zonation of Riparian Floodplain Zone According to Different Types of Vegetation.....	36
Image 17: Representation of a Simplified Food Web in Aquatic Ecosystems [Source: Pinterest]	39
Image 18: Schematic Representation of River Interlinking in India [Source: NWDA]	43
Image 19 : Stolt Kittiwake Vessel in Manchester Ship Canal in UK [Source: Wikipedia]	54
Image 20 : River Ganga at Hardiwar [Source: HT File Photo]	61
Image 21 : The Whanganuai River in New Zealand [Source: James Shook/Wikimedia Commons]	62
Image 22 : Permeable and Non Permeable Spur (Source: http://lib.icimod.org)	64
Image 23 : Sub-merged and Non-submerged Spur (Source: http://lib.icimod.org)	64
Image 24 : Different Orientation of Spur (Source: http://lib.icimod.org)	64
Image 25 : Different Shapes of Spur (Source: http://lib.icimod.org).....	65
Image 26 : Porcupines Installed to Prevent Erosion at Bengena-Ati In Majuli, Assam [Courtesy: Brahmaputra Board]	66
Image 27 : Extension of Flooded River Before and After the Flood (Source: lib.icimod.org).....	67
Image 28 : Levees (Marginal Embankments) Protected By Spurs Along A River In The Plains (Source: lib.icimod.org)	69
Image 29 : Guide Banks And Other Approach Embankments (lib.icimod.org).....	70
Image 30 : Shallow Dry Hindon River Channel at Aurangabad, Saharanpur Being Used As a Track	85
Image 31 : Lakshagrah At Barnawa Is An Important Historical Site Associated With Hindon River.....	91
Image 32 : Balmiki Ashram (Luv Kush Temple), Hindon River Bank, Near Baleni, Dist. Baghpat	91
Image 33 : Shri Dudheshwar Nath Math Mandir, Ghaziabad (Source: Dudheshwarnath.com).....	92
Image 34 : Mean Humidity Data For Saharanpur [Upper Hindon Basin].....	105
Image 35 : Mean Humidity Data For Ghaziabad [Lower Hindon Basin]	105
Image 36 : Hindon Barrage [1979] Diverts Ganga Water in Yamuna at Ghaziabad[19/08/2016].....	121
Image 37: Old Regulator Now In Disuse	121
Image 38 : Nagdev on Dehradun Road [NH-73] [08/08/2016].....	124
Image 39 : Dhamola Nala at Saharanpur [08/08/2016]	125
Image 40 : Kali River [East] Near Pithlokar, Muzaffarnagar [07/08/2016]	130
Image 41 : Krishni River at Barnawa, Baghpat [26/05/2017]	131
Image 42 : Land Use Land Cover Change Graph from 2000- 2016 (Class wise)	141

Image 43 : Cropping Pattern (%) in District Saharanpur [2011-12]	144
Image 44 : Cropping Pattern (%age) in District Muzaffarnagar [2011-12]	145
Image 45 : Cropping Pattern (%age) in District Meerut (2011-12)	146
Image 46 : Cropping Pattern (%age) in District Baghpat (2011-12).....	146
Image 47 : Cropping Pattern (%age) in District Ghaziabad (2011-12)	147
Image 48 : Cropping Pattern (%age) in District Gautam Budh Nagar (2011-12)	148
Image 49 : River Edge Farmer Pumping Water From River, Karhera village, Ghaziabad	152
Image 50 : River Edge Farmer Pumping Water From River, Village Baparsi, Meerut.....	152
Image 51: Heavy Effluents Discharge Pollutes Hindon Near Barrage, Ghaziabad	153
Image 52: Average Total Coliforms at Ten Most Polluted Monitoring Stations in UP.....	155
Image 53 : Meerut Road Industrial Drain and Residential Drain Merges and Discharge Near Hindon Barrage [Towards Southeast; 08/03/2017]	163
Image 54 : Yellow Colored Water in Hindon at Titawi, Muzaffarnagar [24/05/2017]	163
Image 55 : Star Paper Mills Ltd. Saharanpur Is One The Major Contributor To Hindon's Pollution.....	166
Image 56: Level of 1951 Flood on Pier of Rail Bridge U/S of Barrage [204.55 mamsl].....	169
Image 57: Level of 1963 Flood on Old Regulator [204.12 mamsl].....	170
Image 58: Level of 1978 Flood on Pier of Road Bridge U/S of Barrage [205.39 mamsl]	170
Image 59 : A Banned Handpump at Baghpat [Source: Catchnews]	171
Image 60: Krishanpal Singh, Showing Hindon Near Balmiki Ashram, Baleni.....	172
Image 61 : Karamveer Singh Showing Mill Drain Which Pollutes Krishni Tributary	172
Image 62 : Sikka Salawar Mills Discharge Its Effleunts In Krishni	173
Image 63 : Dharam Singh Narrates His Experiences of Yamuna and Hindon River	174
Image 64 : Ratan Singh Narrating His Experiences of Yamuna and Hindon River	174
Image 65 : Dharamveer Singh of Gharbara Village Narrates His Experiences.....	175
Image 66 : Ashutosh Sharma, Resident Near Dhamola Nala Narrates His Experiences Living Near Drain	176
Image 67 : Wakeel Ahmed Narrating The Past of Hindon At Titavi.....	176
Image 68 : A Washerman Narrating His Problems Due Dgraded Water Quality of Hindon	177
Image 69 : Brahm Singh, A Local Farmer Narrating Past Of The River	178
Image 70 : Akmal Rahi. A Resident of Budhana Showing Condition of Hindon at Budhana	179
Image 71 :Qazi Nadeem, Showing Dumping Of Construction Waste In Hindon At Budhana	180
Image 72 : Parvesh Tyagi, A Resident of Ukaoli Village Discusses Problems of Groundwater	180
Image 73 : Residents of Pura Mahadev Village Discussing Water Issues In Their Village	181
Image 74 : A Labourer Narrating His Experiences Of The River.....	181
Image 75 : A Doctor Couple Discussing Health Issues Due To Contaminated Water In Budhana.....	182
Image 76 : A Farmer Discussing Water Pollution Problem in Shamli	182
Image 77: Silk Cotton Tree Plantation Leading to Kaluwala Rao Stream [Towards West; 19/01/2017]..	193
Image 78: Pods of <i>Abrus precatorius</i> Plant.....	195
Image 79: Indian Roller (<i>Coracias benghalensis</i>)[Date: 19/01/2017].....	197
Image 80: Egyptian Vulture Sighted near Dry Stream at Kaluwala [Date: 19/01/2017]	198

Image 81: Indian Gray Langur (<i>Semnopithecus hector</i>) in Mohand Forest Range (Kaluwala Rao) [Date: 19/01/2017]	198
Image 82: Garra Spp. Fishlings Sighted at Kalauwala Rao in Mohand Forest Range.....	199
Image 83: White breasted Kingfisher (<i>Halcyon smyrnensis</i>) near Hindon River at Gagalhedi, Saharanpur [Date:09/08/2016]	202
Image 84: Common Mormon Butterfly (<i>Papilio polytes</i>) on Lantana vegetation near Hindon River at Gagalhedi, Saharanpur [Date: 09/08/2016]	203
Image 85: Poplar Trees Along The Bank Of Hindon River At Maheshpur , Saharanpur	205
Image 86: Black-winged Stilt at Hindon Bank near Maheshpur [Date: 10/08/2016]	206
Image 87: Soil Insects Sighted Near Bank of Hindon at Maheshpur [Date: 10/08/2016]	207
Image 88: Common Leopard Butterfly (<i>Phalanta phalantha</i>) Sighted Near Bank of Hindon at Maheshpur [Date: 10/08/2016]	207
Image 89: Black Kite Sighted at Titavi Area [Date: 09/08/2016]	210
Image 90: Blue Pansy Butterfly (<i>Junonia orithya</i>) Sighted at Titavi Area [Date: 09/08/2016]	210
Image 91: Mahaneem (<i>Ailanthus excelsa</i>) on Hindon Bank at Baparsi, Baghpat.....	212
Image 92: Weaver Birds' Nests on Vialiti Keekar (<i>Prosopis juliflora</i>) at Hindon Bank, Baparsi, Baghpat.	213
Image 93: Red-vented Bulbul Sighted Near Hindon River at Baparsi [Date: 18/01/2017].....	214
Image 94: A Caterpillar Sighted Feeding on Milk Weed Plant Near Hindon River at Baparsi [Date: 18/01/2017]	215
Image 95: Ladybug (Coccinellidae) Sighted Near Hindon Bank at Baparsi, Baghpat [Date: 18/01/2017]	215
Image 96: Tree Hoppers Camouflaging Thorns Sighted on the Bank of Hindon, Baparsi [Date: 18/01/2017].....	216
Image 97: Jungle Jalebi (<i>Pithecellobium dulce</i>) Tree at Hindon Bank, Balmiki Ashram.....	218
Image 98: Hindon River at Balmiki Ashram	218
Image 99: Flock of Indian Silver Bills (<i>Lonchura malabarica</i>) on Hindon Bank near Balmiki Ashram [Date: 17/01/2017]	220
Image 100: Spot-billed Duck (<i>Anas poecilorhyncha</i>) on Hindon Bank near Balmiki Ashram	221
Image 101: Indian Pied Starling (<i>Gracupica contra</i>) on Hindon Bank near Balmiki Ashram [Date: 17/01/2017].....	221
Image 102: Wandering Jew (<i>Commelina benghalensis</i>) at Hindon Bank, Ghaziabad	227
Image 103: Sharpunkha (<i>Tephrosia purpurea</i>) at Hindon Bank, Ghaziabad.....	227
Image 104 : Lotus flower (<i>Nelumbo nucifera</i>) on Hindon Floodplain area (Rajnagar Ext.- Loni Bypass Road in Ghaziabad [Towards South, Date: 28th Sept. 2016].....	228
Image 105: River Purple Heron (<i>Ardea purpurea</i>) Sighted Near New forest Hindon Barrage, Bhaziabad [25/10/2017].....	231
Image 106: Garden Lizard Sighted Sighted on Riparian Vegetation Near Hindon Bridge, Ghaziabad [Date:08/08/2016]	233
Image 107: Blister Beetle Sighted on Riparian Vegetation, Hindon Bridge, Ghaziabad [08/08/2016]...	233
Image 108: Catfish Caught From Hindon Under Karhera Bridge, Ghaziabad [19/08/16].....	234

Image 109: River Lapwing (<i>Vanellus duvaucelii</i>) Sighted Near Hindon Bank, Tilwada, Gautam Budh Nagar [02/02/2017].....	237
Image 110: Ruddy Shelduck (<i>Tadorna ferruginea</i>) Near Yamuna-Hindon Confluence, Tilwada, GBNGR [02/02/2017].....	238
Image 111: Herd of Nilgai (<i>Boselaphus tragocamelus</i>) Sighted Near Hindon at Tilwada, GB Ngr [02/02/2017].....	239
Image 112: Coral-tailed Cloud Wing Dragonfly Near Hindon River, Tilwada, GB NGR [02/02/2017]	239
Image 113: Blister Beetle Near Hindon River at Tilwada, Gautam Buddha Nagar [23/09/2016].....	240
Image 114: : Plain Tiger Butterfly (<i>Danaus chrysippus</i>) Near Hindon River, Tilwada, GB Nagar [23/09/2016].....	240
Image 115: An Inside Glimpse of Pura and Hariyakhera Reserve Forest [18/01/2017]	246
Image 116: Tabelagarhi Reserve Forest as Seen From Hindon River Bank [18/01/2017].....	249
Image 117: An Inside Glimpse of Tabelagarhi Reserve Forest [18/01/2017]	249
Image 118: Jewel Bug Sighted Inside Tabelagarhi Reserve Forest [18/01/2017].....	250
Image 119: Common Leopard Butterfly Sighted Inside Tabelagarhi Reserve Forest [18/01/2017].....	250
Image 120: Black-shouldered Kite Sighted Near Tabela Garhi Reserve Forest [Date: 18/01/2017]	251
Image 121: New forest area on Hindon floodplain near Raj Nagar Ext. Road [Towards West, 28th Sept, 2016]	252
Image 122: An Inside Glimpse of City Forest, Karhera on Hindon Bank [Date: 08/03/2017].....	253
Image 123 : Campus On Floodplain Area Of Hindon At Gagalhedi, Saharanpur [Towards South, 19/01/2017].....	259
Image 124 : Extended Agricultural Fields into The Hindon River at Gagalheri, Saharanpur	260
Image 125 : Construction Debris and Solid Waste in Hindon at Budhana.....	261
Image 126 : Hindon River is Treated as Dumping Ground at Budhana, Muzaffarnagar	262
Image 127 : Kali River at MuzaffarNagar Town[24/05/2017].....	262
Image 128 : Kali River Near Village Maleera, Muzaffarnagar [24/05/2017].....	263
Image 129 : Bajaj Sugar Mill, Budhana, Muzaffarnagar.....	263
Image 130 : Titawi Sugar Complex, Titawi, Muzaffarnagar	264
Image 131 : Drain At Begrajpur Which Eventually Falls Into Kali Tributary Of Hindon	265
Image 132 : Hindon at Pura Mahadev, Baghpat is Infested with Water Hyacinth	268
Image 133 : Hindon Floodplain Area Encroachment by Real Estate at 1 km Downstream Hindon Barrage [Date: 08/03/2017]	269
Image 134 :No. Of Illegal Colonies Have Come On The Banks Of Hindon River Near NH-24. Residents Dump Sewage And Solid Waste Directly Into The River.....	270
Image 135 : Hindon Water Turned Red In 2014 Due To Stone Crushing Units Operating Illegally On Its Bank Near National Highway -24, Ghaziabad [Photo: Baishali Adak, Mail Online India, 18 Dec 2014] ...	271
Image 136 : Locals and activists say the Hindon river pollution is contributing to health issues such as birth defects and skin problems [Baishali Adak, Mail Online India, 18 Dec 2014]	272
Image 137 : Hindustan Times News Article Highlighting Issues of Hindon River [17July 2015].....	273

Image 138 : Natural Flow of Hindon Blocked With Mud For Elevated Road Construction [Location: Hindon Bridge Hapur Road NH-58; Date: 09/08/2016]	273
Image 139 : Pillars for Elevated Road Erected in the Hindon 1 km upstream of HajHouse [Photo: Hindon Jal Biradari, Facebook Post, 18 May, 2016]	274
Image 140 : Pratap Vihar Drain in Ghaziabad Discharge Residential Sewerage in Hindon River	274
Image 141 : Karhera Drain Discharging Its Effluents In Hindon River On Raj Nagar Ext -Loni Bypass Road, Ghaziabad	275
Image 142 : Electric Power Station Near Karhera Bridge, Ghaziabad	277
Image 143 : Dry River Channel as a Result of Diverted Hindon River Channel by Karhera Bridge at Ghaziabad [Towards Southwest; 08/03/2017]	278
Image 144 : Disturbed River Channel as a Result of Diverted Hindon River Channel by Karhera Bridge at Ghaziabad [Towards South; 08/03/2017]	278
Image 145 : Blocked and Incomplete STP Discharge Pipe at Ghaziabad [Date: 08/03/2017]	279
Image 146 : Solid Waste Dumping Site Near Hindon River Ghaziabad [Date: 08/03/2017]	279
Image 147 : Ganga Water Treatment Plant is Located Adjacent Solid Waste Dumping Sites at Ghaziabad [Location 1 km Downstream Hindon Barrage, Ghaziabad]	280
Image 148 : Hindon joins Yamuna at Tilwada vilage, Gautam Buddha Nagar near Delhi	282
Image 149: Arvari River After Rejuvenation [Source: watermanofindia.blogspot.in]	284
Image 150: Check Dam On Arvari River, Rajasthan	284
Image 151 : Kuttemperoor River In Its Flow-Less, Weed-Ridden State. [Source: The Indian Express/ May 9, 2017]	285
Image 152: Kuttemperoor River After Restoration [Source: The Indian Express/ May 9, 2017]	286
Image 153: Devotees Removing Weeds From Kali Bein River In Punjab [Source: The Indian Express] ...	287
Image 154: Sasur Khaderi-2 Before and After Restoration.....	288
Image 155: River Thames England Became One of the Polluted Rivers During 1950s [Source: UnicornTheatre].....	289
Image 156: Murray-Darling Basin Map [Source: MurrayRiver.com]	292
Image 157: Recommended Buffer Zones Around Stream Channels	311
Image 158: Recommendations, Impact and Time Plan Matrix.....	314

List of Maps

Map 1 : Inland Navigation Waterways Of India [Source: India-WRIS Wiki].....	52
Map 2 : Yamuna Basin Map [Source: CGWB].....	77
Map 3 : Course of Hindon and Major Rivers in Uttar Pradesh [Source:mapsofindia.com]	78
Map 4 : Hindon River Location In Yamuna Basin [Source: Basin Webmap, BAPS, Irrigation Dept, UP]	79
Map 5 : The Hindon Basin	81
Map 6 : Hindon River, 1940	83
Map 7 : Hindon Origin in Shivaliks of Northeastern Saharanpur [Basemap Source: Google Earth]	83

Map 8 : Hindon Origin and Associated Locations on SOI Toposheets	85
Map 9 : Width of River Water Channel [Maheshpur] Has Decreased Considerably Over Years.....	86
Map 10 : Bridges, Barrage, Railway Line, Major Roads in Hindon River Basin	87
Map 11 : Major Towns & Religious Sites in Hindon Catchment	93
Map 12 : Spatial Variation of Mean Annual Rainfall in Yamuna Basin	101
Map 13 : Topography and DEM Map of Hindon River Basin	108
Map 14 : Geological Map of Uttar Pradesh	109
Map 15 : Map Showing Physiographic Division of Uttar Pradesh	110
Map 16 : Map: Soil Type Map of Hindon Basin.....	112
Map 17: Depth To Water Table Pre-Monsoon, 2013 [Source : CGWB].....	115
Map 18 : River System, Drainage & Major Irrigation Network.....	118
Map 19: Location of Hindon Barrage, Hindon Canal and Hindon River at Ghaziabad	120
Map 20: Old and New Barrage Structures	120
Map 21 : Map showing Upper Ganga Canal, Jani Escape and Hindon River	123
Map 22 : Map Highlighting the Location of Paondhoi, Dhamola and Nagdev Tributaries	125
Map 23 : Location Of Banganga Tributary	126
Map 24 : Location of Khatauli Escape	127
Map 25 : Location of Khala Nala in SOI Map [H43 R10].....	128
Map 26 : Location of Biralsi Escape in Charthawali Escape in SOI Map [H43 R10].....	129
Map 27 : Location of Sardhana Drain Which Joins Hindon at Kheri Nizd Kalina, Meerut	131
Map 28 : Location of Kanauni Sugar Mill Drain	132
Map 29 : Location of Jani Escape	133
Map 30: Location of Hindon Canal.....	133
Map 31 : Location of Pratap Vihar Drain Which Joins Hindon Near NH-24, Ghaziabad.....	134
Map 32 : Location of Meerut Road Industrial Drain & Ghaziabad Residential Area Drain.....	134
Map 33 : Location of Dasna Drain.....	135
Map 34 : Location of Hawalia Drain in Gautam Buddha Nagar	135
Map 35 : Location of Kot Escape in Gautam Buddha Nagar	136
Map 36 : Land Use/Land Cover Map [Year 2000]	137
Map 37 : Land Use Land Cover Map [Year 2008].....	138
Map 38 : Land Use Land Cover Map [Year 2016].....	139
Map 39 : Land Use Land Cover Change From 2000- 2016	140
Map 40 : Palaeo channels of Hindon River Detected in the Last 16 Years	142
Map 41: Index Map of Hindon River Basin [I&WRD, Govt. of UP].....	186
Map 42: Map Highlighting Biodiversity Assessment Sites on Hindon River	192
Map 43: Google Earth Image (2016) Showing Reserve Forest Areas Near Barnawa	241
Map 44: SOI Toposheet (2007) Showing Reserve Forest Areas Near Barnawa.....	242
Map 45: Mawi Kalan Reserve Forest on Hindon River Bank [Google Earth Image, 2016]	243
Map 46: SOI Toposheet (2007) -Mawi Kalan Reserve Forest on Hindon River Bank	243
Map 47: Google Earth Image (2016) Showing Open Babul Protected Forest North of Mawi Kalan	244

Map 48: SOI Toposheet (2007) - Open Babul Protected Forest North of Mawi Kalan	244
Map 49: Google Earth Image (2016) Showing Pura and Hariyakhera Reserve Forest	245
Map 50: SOI Toposheet (2014) - Pura and Hariyakhera Reserve Forest Along Hindon	245
Map 51: Google Earth Image (2016) Showing Shahbanpur Shrub Area	247
Map 52: SOI Toposheet (2014) Showing Shahbanpur Shrub Area Along Hindon	247
Map 53: Google Earth Image (2016) Showing Tabelagarhi Reserve Forest East of Saraura Village.....	248
Map 54: SOI Toposheet (2007) Tabelagarhi Reserve Forest East of Saraura Village.....	248
Map 55: Google Earth Image (2016) Showing New Forest Area on Hindon Bank.....	251
Map 56: Google Image (2016) - City Forest, Karhera on Hindon Bank [East of Hindon Air Base].....	252
Map 57: Location of Hindon River in Saharanpur District	257
Map 58 : Location of Drains & Star Paper Sugar Mill at Saharanpur	258
Map 59 : Visible Difference in Water Color of Dhamola and Hindon at Sadholi Hariya Village	258
Map 60 : Campus On Floodplain Area Of Hindon Interferes With Natural Course At Gagalhedi, Saharanpur.....	259
Map 61 : Location of Hindon River in Muzaffarnagar District	261
Map 62 : Location of Bajaj Sugar Mill, Budhana, Muzaffarnagar	264
Map 63 : Location of Hindon River in Meerut District	266
Map 64 : Location of Sardhana Drain	266
Map 65 : Location of Kanauni Sugar Mill	267
Map 66: Location of Hindon River in Baghpat District.....	267
Map 67 : Location of Hindon River in Ghaziabad District	269
Map 68 : Site Of Encroachment On Hindon Floodplain	270
Map 69 : Illegal Colonies Banks Of Hindon River Near NH-24 As Seen From The Satellite View	271
Map 70 : Location of Pratap Vihar Drain in Ghaziabad.....	276
Map 71 : Location of Meerut Road Industrial Drain and Residential Drain in Ghaziabad	276
Map 72 : Diverted Hindon River Channel by Karhera Bridge at Ghaziabad.....	277
Map 73 : Location of Hindon River in Gautam Buddha Nagar District	281
Map 74 : Newly Constructed Bridge 8 Lane Bridge on Hindon River to Connect Noida & Greater Noida [Source Google Earth, 2016]	281
Map 75: Proposed Agroforestry Belt Along Watershed Line.....	310
Map 76: Proposed New 10 km Long Canal From Muradnagar To Hindon	312
Map 77: River Basins in India [Source: WRIS, India]	325

List of Tables

Table 1 : Recession of Gangotri Glacier	5
Table 2 : Summary of Direct Drivers and Their Impact on Ecosystems and Their Services	10
Table 3: Ecosystem Services of Australia's Tropical Rivers Systems and Examples of The Activities and Benefits They Provide (Straton & Zander 2009)	13

Table 4 : Draft River Regulation Zone Notification	72
Table 5 : District Area & Hindon Basin Area	94
Table 6 : District Subdivisions	94
Table 7 : District Population Levels.....	95
Table 8 : Population, Area & Density of Catchment Districts [2011].....	95
Table 9 : District-Wise Total Urban And Rural Population In 2001 And 2011	96
Table 10 : Population Of Hindon Basin* [2011].....	96
Table 11 : Districtwise Rainfall Normal during Monsoon (June, July August, Sept) 1951-2000*	97
Table 12 : District-wise Rainfall Normal Post Monsoon (Oct, Nov, Dec) 1951-2000*	98
Table 13: Monthly Precipitation Data In mm [Annual Mean: 1991 - 2001]	98
Table 14: Average Annual Monsoon and Post Monsoon Rainfall [2012 - 2016] in Catchment Districts [mm].....	99
Table 15 : Mean Rainfall Distribution in Yamuna Basin.....	99
Table 16: No. of Rainy Days In Ghaziabad Distt [1901 – 1950].....	102
Table 17: No. of Rainy Days In Ghaziabad Distt [1980 – 2002].....	103
Table 18 : Annual Mean Min. Temp. Of Saharanpur District [1971 - 2001]	103
Table 19 : Annual Mean Max. Temp. Of Saharanpur District [1971 - 2001].....	103
Table 20 : Annual Mean Min. Temperature Of Ghaziabad District [1971 - 2001]	104
Table 21 : Annual Mean Max. Temperature Of Ghaziabad District [1971 - 2001]	104
Table 22 : Depth To Water Level in Basin Districts [2013].....	114
Table 23 : Districtwise Grounwater Resources Availability, Utilization and Stage of Development (ha.m.)	116
Table 24 : Mean Stream Run-Off Of River Hindon (BCM).....	119
Table 25 : Flow With 90% Probability (MCM).....	119
Table 26 : Water Discharge Data From Hindon Barrage [Ghaziabad] [Average Values In Cusecs Calculated From Daily Flow Data During June - Oct, 2016]	119
Table 27 : Salient Features of Hindon Barrage	119
Table 28 : Estimation of Surface Runoff In The Hindon Basin	122
Table 29 : Distribution of Landuse/Land Cover in Hindon Basin [2016]	136
Table 30 : Land Use Land Cover Map Change from 2000- 2016.....	140
Table 31 : District -wise Major Crops and Net Cultivated Area [Basin Area].....	143
Table 32 : Standard Irrigation Water Requirement For Crops.....	148
Table 33 : Crop-wise Area [Ha] Distribution Across Basin Area District-wise.....	149
Table 34 : Crop-wise & Distt-wise Basin Irrigation Water Requirement [MCM]	149
Table 35 : Domestic Sector Water Consumption In The Basin	150
Table 36 : Water Resource of Hindon Basin	150
Table 37 : Approximate Water Budget Of The Hindon Basin [MCM]	150
Table 38 : Disposal of The Rainfall Endowment of Hindon Basin [MCM]	151
Table No. 39 : Thirteen Priority 'A' Rivers classified by CPCB, 2015	153
Table 40 : The Water Quality of the Hindon River (1988-89)	156

Table No. 41 : Mean Water Quality, 2010	156
Table No. 42 : Water Quality Data, 2010	157
Table No. 43 : Water Quality Parameters [August, 2016]	158
Table No. 44 : Water Quality Parameters [Jan-Feb, 2017]	159
Table 45 : CPCB Standards For Discharge Water Quality on Inland Surface Waters.....	160
Table 46 : Surface Water Quality Standards – Class B of CPCB	161
Table No. 47 : Heavy Metal Tests [March-May 2017]	162
Table No. 48: Details Of Sampling Location On River Hindon And Tributaries [PSI]	164
Table No. 49 : Heavy Metal Concentrations In River Hindon And Its Tributaries.....	165
Table No. 50 : Pesticide Concentrations In River Hindon And Its Tributaries.....	167
Table 51 : Total Workers, Cultivators, Agriculture Labour In The Basin	183
Table 52: Tree Species Observed At Kaluwala Rao, Saharanpur	193
Table 53: List of Herbs/Shrubs	194
Table 54: List of Birds	196
Table 55: Tree Species Observed	199
Table 56: List of Herbs/Shrubs	200
Table 57: List of Birds	201
Table 58: Trees Observed	203
Table 59: List of Herbs/Shrubs	203
Table 60: List of Birds	205
Table 61: Tree Species Observed	208
Table 62: List of Herbs/Shrubs	208
Table 63: List of Birds	209
Table 64: Tree Species Observed	211
Table 65: List of Herbs/Shrubs	211
Table 66: List of Birds	213
Table 67: Trees Observed	216
Table 68: List of Herbs/Shrubs	217
Table 69: List of Birds	219
Table 70: Tree Species Observed	224
Table 71: List of Herbs/Shrubs	224
Table 72: Biodiversity Indices for Species Observed Near Hindon Barrage, Ghaziabad.....	225
Table 73: List of Birds	229
Table 74: Trees Observed	234
Table 75: List of Herbs/Shrubs	234
Table 76: List of Birds	236
Table 77: Guidelines For Urban River Revitalisation.....	300
Table 78: Common River Restoration Goals And Common Techniques Used In River Restoration That May Lead To Ecological Improvements.	302

