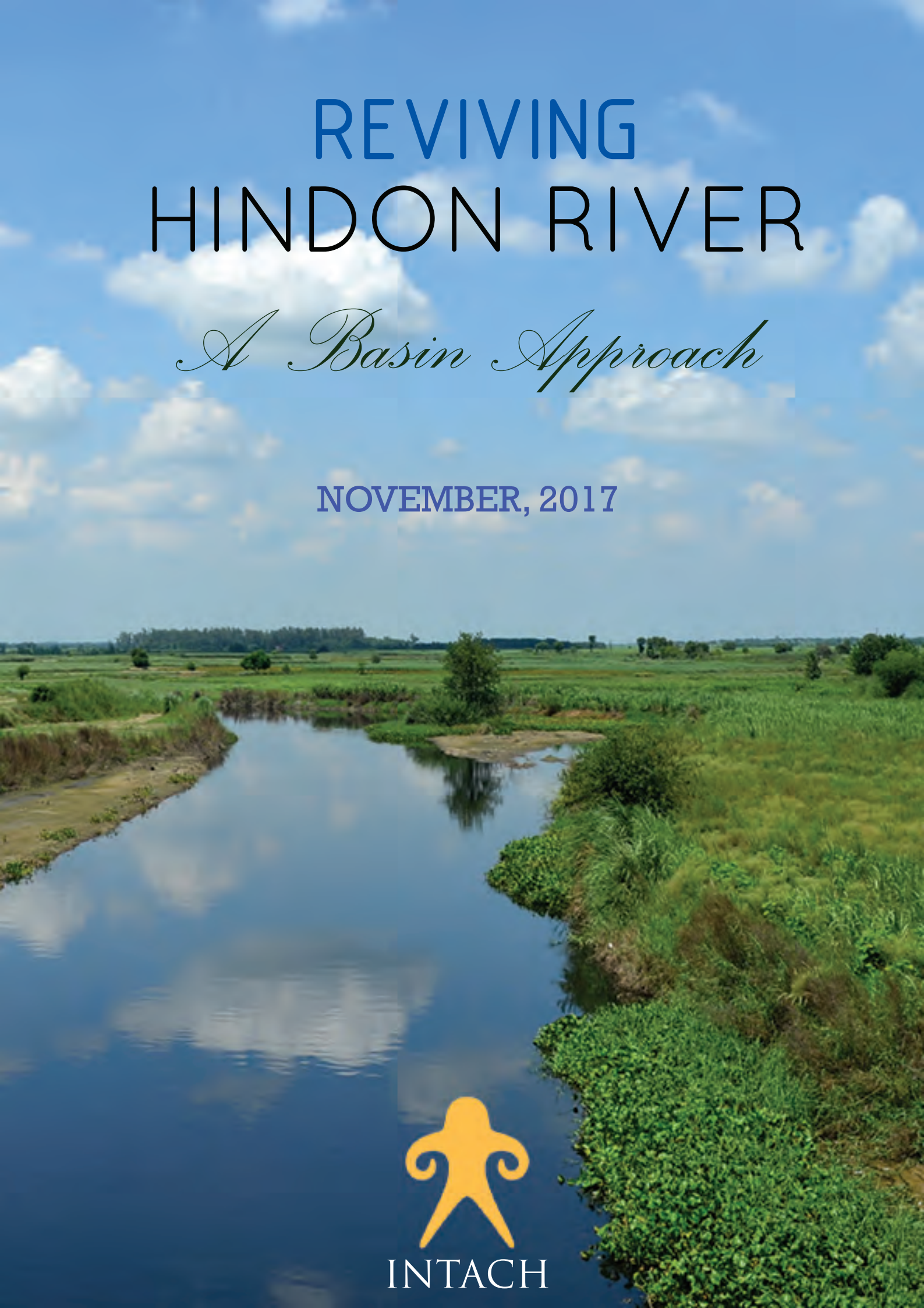
REVIVING HINDON RIVER

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)

INDIAN NATIONAL TRUST FOR ART AND CULTURAL HERITAGE

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 GoI 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.

THE NATURAL HERITAGE DIVISION (NHD)

Nature is the well spring of culture and if nature thrives so will culture. Several organizations work separately in the field of environment or of culture. The Natural Heritage Division's unique niche is hard core environmental issues and projects. Over the years the diverse projects of the Division have generated substantial in-house experience and capacities but also coalesced into thematic programs

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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.

In order to correctly reference this work, copy the following format:

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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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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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