

Concept Paper

Transforming the Najafgarh Basin

Date (Tentative): 17th Aug, 2017

Venue: DLF, Phase-IV

Background and Rationale

Gurugram, a city of 2.5 million, lacks water security. Similar is the problem with south-west Delhi. The future of vast investments and populations is clouded as fresh groundwater is depleting rapidly, surface supplies are limited and increasingly contested, storage reservoirs in the Himalayas increasingly drawing flak for a variety of ecological reasons.

Historically, settlements have thrived by nurturing and conserving their local water resources by making rainwater storages. With reliance on long distance water transfers the local resources were forgotten and their lands became real estate. With poor infrastructure development the menace of water logging has become recurrent - the rain water being seen as an inimical scourge rather than a life giving resource.

Much can be done at the local level by revival of large hydrological assets extant on the ground. This workshop would examine the larger possibilities in Gurugram and come up with an action plan to operationalize them.

Geo-hydrologically, the drainage network in Delhi/NCR is divided into six zones, namely-(i) Northern Zone, (ii) Western Zone, (iii) Central North West and South East Zone, (iv) Central South and South East Zone, (v) East Zone and (vi) South Zone. The Najafgarh drain is 105 Km long and runs through North-east to South-west zone with highest discharge of 283 cumsecs.

S. No.	Catchment	Location	Length of main drain (km)	Drainage Channels	Discharge (cumsecs)
1.	Alipur	North	140	Supplementary Bhiwana Escape -No.6 drain- New Drain	141 33
2.	Kanjhawala	West	120	Mungeshpur	52
3.	Najafgarh	Central-North, West and South-West	105	Najafgarh Palam Bhupania-Chudania (from Haryana)	283 86 40
4.	Khushak- Barapulla	East	-	Khushak and Barapulla drains	120

				(‘nullah’)	
5.	Trans Yamuna	South	45	Shahdpur outfall- Ghazipur Trunk drain No.1	158 86
6.	Mehrauli		5		

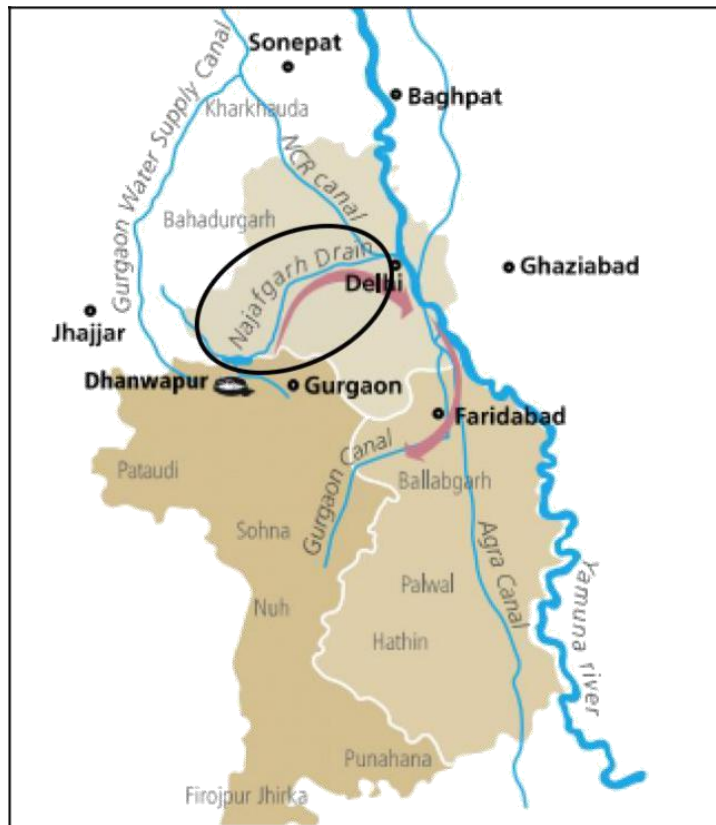
Source: DuAc, Rejuvenation of Najafgarh Waterways, 2015

Najafgarh Drain (NjD) is a natural channel known as ‘Sahibi River’ that originates in the Aravali hills in the Alwar – Rewari region of Rajasthan and Haryana. The drain/river enters NCT on the south western side and traverses a length of 41 km before falling into the river Yamuna in the northern part of Delhi.

Historically, it has served as a drainage network for storm water for parts of Haryana and Delhi. The river/drain along with its catchment (374 km²) forms a rich natural habitat for numerous species of flora and fauna. It was channelized in 1978 with the objective of integrating it with the storm water drainage system of the city and was renamed as ‘Najafgarh Drain’. Currently, Najafgarh Drain is the largest sewage carrying drain in the capital. It is 41 km long and is joined by 22 smaller feeder drains. Najafgarh drain discharged about 2,000 MLD of waste water into the river Yamuna out of which 70% remains untreated. The BOD load varies between 80 t/d to 195 t/d, which represents 50% of hydraulic load and over 25% of organic load from NCT Delhi flowing into the river Yamuna (Nema). The domestic/residential sector is the largest contributor to the waste water load in the drain (70% of BOD load).

The Najafgarh drain flows through the north-western part of Gurgaon. Further, the drain-network in Gurgaon flows into NjD. Thus NjD is the backbone of the drainage network in Gurgaon. Excessive flooding has occurred in parts of Gurgaon over the years due to overflow and backflow from drains during the monsoon season. Severe floods have occurred in the past, notably in the year 1967 and consecutive floods in the years 1975 -1977 as well as in 1995-1996. The effect of the floods is exacerbated by anthropogenic activities such as infrastructure development (building, canals, roads etc.) which obstruct the natural flow of water. This is notably seen in the Badshapur drain (that drains into NjD) near Khandsa village (Hindustan Times, 2016). Infrastructure development in the catchment area of the drain has increased the runoff generated from the region. This has led to overutilization of the drain, the effect of which is exacerbated by poor management of the drains itself. The floods have resulted in severe drinking water and soil contamination in the region. For instance, 200 acre of land adjoining the NjD (in Gurgaon) remained uncultivated in 2015 due to soil contamination from toxic effluent overflow from NjDs during floods (Times of India, 2015). Also, flooding on 500 acres destroys crops at Daulatabad (ToI 24/11/2016).

Geographic Location of Najafgarh Drain



Source: Centre for Science and Environment, 2017

The Najafgarh Jheel has also proved to be one of the prominent remaining habitats for migratory birds (Greater Flamingos skip Sultanpur, Okhla, find new haven in Najafgarh) in the NCR (HT 8/8/16). In lieu of this situation a Capacity Building Workshop and Expert Group meeting is proposed for mapping existing issues and integrating various sectoral solutions for the rejuvenation of the Najafgarh catchment in a holistic manner.

Objectives

The workshop aims at:

1. Understanding the current scenario;
2. Highlighting the ideal scenario;
3. Identification of gaps and challenges between current and ideal scenario;
4. Identification of strategies to deal with identified gaps in a holistic and sustainable manner.

Methodology

The workshop would bring various stakeholders [civil society groups, experts, govt. agencies] on a common platform. The participants would make presentations on various aspects followed by discussions. A concluding section would develop the action plan.

Expected Outcome

The workshop will try to identify the gaps and challenges for the cleaning of the Najafgarh Drain and revival of Najafgarh Jheel through a holistic and sustainable approach taking in to account



India Water Partnership



strengths of existing projects and good practice examples to overcome sewage problems and controlling flooding situation in the region.

Organizers

The Workshop will be convened by India Water Partnership, INTACH and DLF.