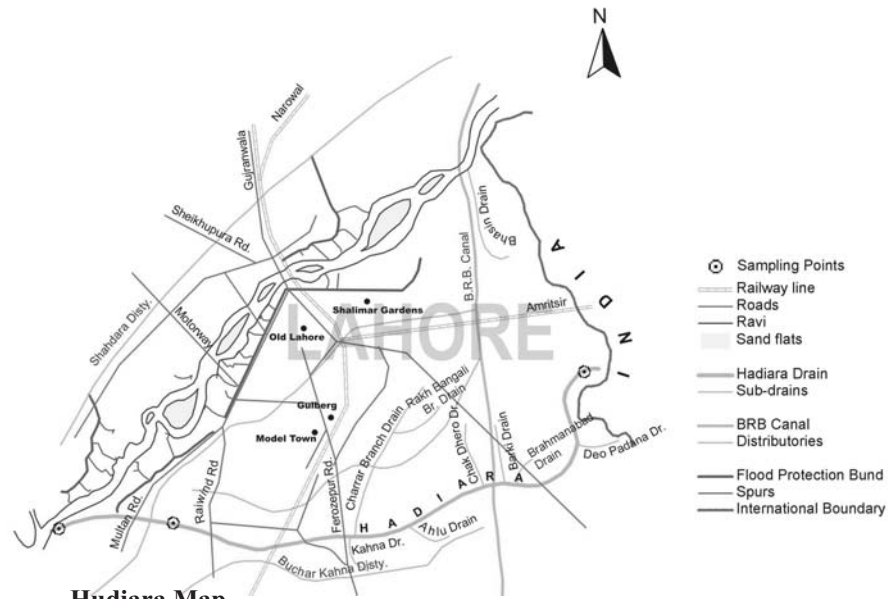


## Goal

To undertake measures for the improvement of water quality of Hudiara Drain (a transboundary water channel) on both sides of the border.



Hudiara Map

## Objectives

- To reduce the extent of water contamination of Hudiara drain by sensitizing the industries to adopt environmentally friendly waste disposal techniques/cleaner production options.
- To create meaningful partnerships amongst all stakeholders, including government line departments, the non profit sector and initiate a cross border dialogue to take measures for improving the water quality of Hudiara Drain.
- To raise awareness amongst the communities about health/hygiene issues and develop a model village health and education plan.

## Partners

- GEF – Small Grants Programme (SGP) UNDP
- Cleaner Production Institute (CPI)
- Lahore Chamber of Commerce and Industry (LCCI)
- Environment Protection Department (EPD) - Punjab
- WWF – India

## Supporting Institutions

- Punjab Irrigation and Dranaige Authority (PIDA)
- Small and Medium Enterprises Development Authority (SMEDA)
- Punjab Industrial Estate Development and Management Company (PIEDMC)
- Union Councils in villages along Hudiara Drain

- Punjab Social Welfare and Health Department

## Background

Hudiara drain originates from Batala (District Gurdaspur - East India, Punjab) and after being joined by many tributaries in Amritsar and covering 40 Kms enters Pakistan near *Lalaul* village. It covers a stretch of 55 Kms and ultimately falls into river Ravi.



Hudiara Drain enters Ravi

This drain was originally a storm water drain. However, dumping of industrial and domestic wastewater has turned it into a perennial drain. Its annual average discharge at its confluence with the River Ravi is 178 cusecs. There are above 100 industries of different sectors situated along Hudiara Drain in Pakistan which dump effluent into it. In addition wastewater of some parts of Lahore city and of other small villages also enters the drain. In its project on Water Quality Monitoring of Hudiara Drain project (phase I), WWF-Pakistan has assessed the environmental and health hazards of this drain and found it to be highly polluted. The water is unfit for irrigation use. It is biologically contaminated and does not support any aquatic life. It is also contributing to groundwater contamination.



Water quality being monitored

## Conclusion of Hudiara Drain Project (Phase I)

- 1) Hudiara Drain is a wastewater carrier, that does not even meet National Environmental Quality Standards (NEQS) devised for the industrial effluents.
- 2) Based on certain parameters for example TDS (Total Dissolved Solids), Cd (Cadmium), Cu (Copper) and Mn (Manganese) concentrations in drain water. Its water may be discouraged for irrigation in long-term use, because of its contamination.
- 3) Threat to water quality and aquatic life of the River Ravi can be significant particularly during the times of low flow.
- 4) Almost all pollutants extent in the drain water may be similar both in Pakistan and across the border.

## Need for Hudiara Drain Project (Phase II)

The Water Quality Monitoring study incorporates a Water Quality Management Plan that proposes some mitigation measures for improving the drain's water quality. After a series of stakeholders consultative workshops/meetings, WWF-

Pakistan proposed a project with the overall goal to improve the water quality of Hudiara Drain. Major tasks defined are to work with the industry and provide them with technical support/assistance to help them adopt cost effective environmental solutions. With growing environmental concerns globally, export industries themselves are looking into cleaner options due to buyer pressures and the local industries would follow if the options provided are cost effective. In addition, partnerships with the public and private sector were also identified as an important tool to achieve the project objectives.

## Approach

- Meaningful partnerships with government departments, industry/industrial associations and with cross border stakeholders would be built to develop a task force to facilitate the mitigation measures to improve the water quality of the Hudiara Drain.
- Under this project WWF – P plans to build the capacity of industries located along the Hudiara Drain by providing them with technical support/assistance in order to facilitate them to adopt cost effective environmental solutions. Our main partner for this task would be environmental consultants from the Cleaner Production Institute (CPI). The Lahore Chamber for Commerce & Industry would be a key platform to liaise with industries under this project.
- The GIS Lab based at WWF–Pakistan will develop web based interactive maps that will define the geographic distribution of Hudiara Drain Industries. WWF - P plans to add the industry sectoral profiles in the map.
- The recent conducive environment between India and Pakistan provides an excellent opportunity to discuss transboundary issues such as the Hudiara Drain. In this regard WWF–India has been contacted to develop similar measures as taken in Pakistan to reduce the pollution load of the drain at other side of the border. This initiative will act as a pioneer in regional cooperation in South-Asia and can act as a model to tackle pollution issues in transboundary water channels.
- A small part of the project also focuses on working with the community in order to enhance their awareness regarding health, hygiene and environmental issues that may arise from the use and/or exposure to the drain's water. WWF-Pakistan is also interested to develop a model village health and education plan that may be replicated in other villages at a later stage.



Skin infections

### For further information please contact

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## Benefits

1. Partnerships developed among relevant stakeholders (industry/industrial associations, government, and environmental consultants) in order to involve them for improving the water quality of a model transboundary channel.
2. Spatial analyses conducted and a Geographical Information System (GIS) based database developed with comprehensive profile of industrial units located in the vicinity of Hudiara Drain.
3. Capacity of partners from government departments and industries built to manage environmental pollution issues. Technical assistance will be provided to industries regarding cleaner production and cost effective environmental solutions. *(Cost effective environmental solutions will be demonstrated in one or two industries provided the industry is willing to invest in such solutions).*
4. Cross border dialogue initiated with Governments, Aid agencies and Civil Society Organisations (CSOs) to explore opportunities for resource mobilization in order to carry out future activities.
5. A community outreach programme developed and implemented with a major component of awareness raising regarding environmental and health/hygiene issues.



Community outreach programme



Technical assistance to industry /CP workshops

## Our Mission

WWF aims to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption

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Freshwater & Toxics Programme  
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# Hudiara Drain Project Phase II

Taking measures to improve  
the water quality of Hudiara  
Drain through active  
stakeholders participation

## About the Organisation – WWF - Pakistan

WWF-Pakistan is a major conservation NGO in the country that was established in 1970, with a mission to promote nature conservation and environmental protection for sustainable development in Pakistan. WWF-Pakistan contributes towards conserving Pakistan's unique natural diversity by taking into account the future needs of the people.

## Toxics Programme

This program is designed to end the threats to biological diversity from hazardous chemicals particularly those used in industrial, agricultural and consumer products. This can be done by working closely with the government, local NGOs, businesses and industry in order to raise awareness, capacity building, shape effective policies, and identifying safer alternatives where possible.

Project funded by UNDP  
under GEF Small Grants Programme



for a living planet