

**INTERIM REPORT on
Needs Assessment and Portal Development for**

**Setting Up an Industrial Wastewater
Technology Platform in India**

JUNE 2020

**Under the GIZ-India project
'Sustainable Environment-friendly Industrial Production' (SEIP) Phase II**



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GeoStone

List of Abbreviations:

CGWA	Central Ground Water Authority
CGWB	Central Ground Water Board
CPCB	Central Pollution Control Board
DoWR&S	Department of Water Resources & Supply
IWMI	International Water Management Institute
IWSN	Indian Water Stewardship Network
MEA	Multilateral Environmental Agreement
NGO	Non-Governmental Organization
NGT	National Green Tribunal
MoEFCC	Ministry of Environment, Forests & Climate Change
MoT	Ministry of Textiles
MoWR,RD&GR	Ministry of Water Resources, River Development & Ganga Rejuvenation
NWM	National Water Mission
SDoI	State Department of Industries
SDoT	State Department of Textiles
SPCB	State Pollution Control Board
SGWB	State Ground Water Board
SWM	Sustainable Water Management

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1.0 BACKGROUND

1.1 Context

GIZ is engaged in the field of international cooperation for sustainable development and international education work, dedicated to shaping a future worth living around the world. GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. GIZ's main commissioning party is the German Federal Ministry for Economic Cooperation and Development (BMZ). As a federal enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development in more than 120 countries worldwide.

Under the Indo German Development Cooperation, a project on “Sustainable and Environment-friendly Industrial Production” (SEIP) was taken up from March 2015 to February 2019. SEIP project focused on finding solutions to industrial wastewater and water so as to reduce pollution, besides working on corresponding state level action plans and national level policy instruments. Ref. www.seip.urban-industrial.in.

The second phase of the Sustainable and Environment-friendly Industrial Production (SEIP) that will be implemented from March 2019 to February 2022 is based on the experiences from the preceding SEIP project that ended in 02/2019. The second phase of SEIP will continue to have a focus on abatement of industrial wastewater pollution in the context of urban areas as well as the pollution of rivers and other water resources. The aim of the project is the promotion of sustainable industrial development in the urban sphere by reducing industrial wastewater pollution through the strengthening of strategic and operational governance structures including framework conditions for regulating, implementing and monitoring. The Ministry of Environment, Forest and Climate Change of the Government of India is the implementing partner.

The objective of the SEIP phase 2 project is, “The strategic and operational governance structures of the Indian Government to effectively combat water pollution from industrial wastewater are strengthened.” The SEIP II phase works on the following main outputs:

- Output 1: Strengthening of Legal Framework
- Output 2: Strengthening of Organisational Procedures and Processes
- Output 3: Strengthening of Incentive Mechanisms
- Output 4: Guidelines/e-portals/reference documents
- Output 5: Resource efficiency (RE) and sustainable consumption & production (SCP)

On the topic of industrial wastewater management, industries often ask for information on available technologies, case examples and best practices so that they can look for solutions for problems related to wastewater problems in their companies.

There is a need for a technology platform from where information can be obtained by the industries and support obtained if needed for additional information such as suppliers/manufacturers of equipment, B2B meetings, site visits etc. Different forms of Technology exist today such as UNIDO's Sustainable Technology Promotion Platform¹

1 http://www.unido.or.jp/en/activities/technology_transfer/technology_db/

(STePP), European Technology Platform² etc. Also, in Germany and Europe, Best Available Techniques Reference Documents exist, which can be used by public agencies as well as private sector (ref. <https://eippcb.jrc.ec.europa.eu/reference/>). However, there is a need for a customised Wastewater Technology Platform to support industries in providing with relevant information and support.

As part of SEIP II project, GIZ contracted **GeoStone Corpration** for developing, hosting and operating the envisioned Industrial Wastewater Technology Platform.

1.2 Objective of the project

The objective of this project is to set up an Industrial Wastewater Technology Platform for making available relevant information on industrial wastewater management including conveyance systems, wastewater treatment, recycle/reuse, monitoring etc. to all the relevant stakeholders and to provide services such as information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc.

2.0 STUDY METHODOLOGY

As the Stakeholder Mapping is focused on Water Stewardship, the boundary limits were set from water to treated wastewater. The water intensive operations of the value chain in the process would primarily be wastewater generation units at Industry level.

Understanding Wastewater Chain:

The industry can be broadly divided into three segments – Those who are allowed to discharge treated wastewater on Land or in Water Body (Including Municipal Sewers), Industries discharging their partly treated wastewater to CETPs and Industries who maintain Zero Liquid Discharge(ZLD) in absence of any discharge /disposal mechanism for treated wastewater. These stakeholders play a vital role in the functioning of the Wastewater Treatment Segment. They may be summarized as follows, -

1. Policy Makers (Government)
2. Regulators / Enforcement agencies (CPCB/ SPCBs/PCCs)
3. Industries Associations
4. State Industrial Development Corporations (SIDCs)
5. Ministry of Textiles, Government of India

6. CETP Developers & Operators
7. Wastewater Technology and Equipment suppliers
8. Facilitators (who play a positive/ support role to the industry) (Public/ Private)
9. Inputs/ Resources (Raw Materials, Labor, Water, Machinery, Finance, .etc.)
10. Community
11. NGOs
12. Judgments and Orders of Hon'ble NGT and Other Competent Courts of Law

3.0 IDENTIFICATION OF STAKEHOLDERS:

The Stakeholder Mapping exercise started off with the understanding of the actors/ agencies involved in the Water Use/ Wastewater Management at various levels of hierarchy. Further a thorough study of the Industry Sector was taken up holistically into processes involved from Industrial activities ending with the wastewater generation. As the focus of this study is limited to only wastewater technologies, the other segments into other processes and its blends were not considered for detailed study. The stakeholders mapped were hence limited to the ones associated either with wastewater technologies or operations given their linkage with wastewater treatment.

GeoStone had interactions with various stakeholders to validate the understanding and to ensure that all critical stakeholders are captured in the list of identified stakeholders that are linked to Wastewater Management at all levels. The methods adopted for this strategic review and mapping across the stakeholders include:

- Primary data collection through interviews and visits
- Secondary literature review and desk assessment
- Key Informant Interviews
- Group interactions
- Focus Group Discussions
- Online (Web based) Webinars
- Online (Web Based) Workshop

4.0 STAKEHOLDER CONSULTATIONS:

On the topic of industrial wastewater management, industries are in search of information on available technologies, case examples and best practices to arrive at an optimum solution for problems related to wastewater in their companies. The industries and the pollution control boards will be supported with establishment of an Industrial Wastewater Technology Platform, for making available relevant information and available technologies on industrial wastewater management including conveyance systems, wastewater treatment, recycle/reuse, monitoring etc.

To develop the required necessary framework, this activity includes four stages – 1. Needs gathering 2. Designing and developing industrial wastewater technology platform 3. Commissioning and operating the technology platform including e-portal and the services 4. Plan for sustainability of the technology platform.

The activity is being executed by Experts from SEIP-GIZ and a senior team of national and international experts from M/s Geostone Corporation. The activity is in good progress and status as of June 2020 is presented below,-

Progress so far:

△ List of Meetings/Information Exchange held with partners:

- **02 July 2019:** GIZ informed CPCB (Output 2 Coordinator, Ms. Garima Sharma) that Industrial Wastewater Technology Platform was found to be one of the promising activities to be taken up under the Output 2 “Organisational Procedures and Processes” of the SEIP II project.
- **23 July 2019:** A meeting was held between SEIP II, GIZ and CPCB officials (Mr. V. P. Yadav, Divisional Head, Mr. P. K. Gupta, Divisional Head, Ms. Garima Sharma, Assistant Secretary and Scientist ‘D’, Mr. Vinay Kumar Upadhyay, Scientist ‘B’, Ms. Alpana Narula, SSA). In this meeting, GIZ shared the international examples (e.g. STePP, UNIDO; European Technology Platforms, Europe; Water Online, US) along with the preliminary scoping of developing the Industrial Wastewater Technology Platform for India.
- **14 October 2019:** GIZ informed CPCB (Ms Garima and Mr Sudhakar) through an email that Industrial Wastewater Technology Platform topic had been taken up and the process of appointing a consultant was initiated.
- **30 October 2019:** A project review meeting was held between GIZ and CPCB under the Mr. Sudhakar’s chairmanship at the CPCB office. In this meeting, the progress of appointing the national consultant for Industrial Wastewater Technology Platform was apprised. GIZ also shared that the national consultant will develop the concept with support of a German Expert for this subject.
- **10 November 2019:** A meeting was held between GIZ and Patparganj Industrial Estate Association for sharing/discussing the findings on the gaps and needs for the Output 2. The meeting was chaired by Mr. Manmohan Mehra, General Secretary, PFEA. In this meeting, he had agreed that an online platform for accessing the environmental information from governments, technology providers and networking with buyers/sellers was missing in India. He said that the platform would help industries in ease of doing bussing and complying with the environmental laws and prescribed conditions.
- **28 November 2019:** A meeting was held between M/s GeoStone and the Chairman of Environment Committee (Mr. Vatsal Naik) along with other industrial representatives of Southern Gujarat Chamber of Commerce & Industries (SGCCI) at Surat. During the discussion, SGCCI suggested to include the section on advanced technologies, technology

vetting process and adaptation of BATs in Wastewater Treatment Technology chain in India with specific conditions, for the benefit of industries.

- **29 November 2019:** A meeting was held between M/s GeoStone and the member (Mr. G.P. Singh) of Punjab Dyers Association, Ludhiana, Punjab at CETP site office. During the discussion, Mr G.P. Singh, suggested to include complete information and aspects of (e.g. design, development, business model, operations and maintenance) CETP in Industrial Wastewater Technology Platform. He shared that industries struggle to find this information at one place.
- **30 November 2019:** A meeting was held between M/s GeoStone and the technology provider Naturetech, operating as a contractor for German technology companies (viz. I+M Zismann and Jaeger Umweltechnik) in Surat. Naturetech's representatives (Mr Anil Fatepuria, Mr Harshad Fatepuria, Mr Anurag Fatepuria, Mr Malav Raskapoorwala, Mr VK Desai, Ms Rashi Jajoo) participated in the meeting and suggested that the proposed platform should act as a bridge for B2B and B2C activities in the field of Wastewater between India and Germany, hence, it must be designed accordingly. Naturetech expressed its interest in serving Indian and German companies that are facing various issues related to B2B and B2C activities.
- **10 December 2019:** A meeting was held between M/s GeoStone and Bhagwanpur Industrial Area, Uttarakhand (Mr. Sanjay Pal, Mr Ketan Dhama, Mr Surendra Chaudhary, Mr Ramen Bajaj, Mr Kailash Choudhary, Mr Surendra Yadav, Mr Shivam Goyal, Mr Rajat Bhatia, Me Mohammed Hamir & Mr. Gautam Kapoor). During the discussion, the association members suggested that topics/information such as ETP development process, different wastewater treatment technology with applications, impact on Hon'ble NGT orders time-to-time and regulatory aspects of effluent treatment should be made available on Technology Platform. They said that with the facilitation of this information, industries would be able to run their business well.

Photographs of Meeting at Bhagwanpur Industrial Area, Uttarakhand



- **13 December 2019:** A meeting was held between M/s GeoStone and Pharma Association of Selaqui Industrial Area, Uttarakhand (Mr. Sanjay Sharma, Mr Maheshwar Prasad, Mr

Sunil Kumar, Mr Rajesh Shukla & Mr Mahendra Bhatt). The association members had suggested to include information on advanced technologies for pharma industries and ZLD technologies as they struggled to get this information in public domain.

Photographs of Meeting at Selaqui Industrial Area, Dehradun, Uttarakhand



- **17 December 2019:** The first online webinar was organised by Geostone Corporation for one and half hour on the topic “Knowledge & Technology Platform for Water & Wastewater”. The German expert “Prof Christian Kazner” gave the presentation on the European Environment Technology Platforms. He explained and gave his suggestions on the important aspects e.g. purpose, concept, target audience, development, operations and maintenance, information exchange platforms, business models and sustainability aspects. 100+ Representatives from organisations including CSE, Development Alternatives, CII, FICCI, ASSOCHAM, Amity University, Delhi University, IIT Delhi, TERI University, DSIIDC, NMCG, SIIDCUL, UKEPCB, World Bank, MEPPL, Aquatech Systems, Doshion, Earth Water, Gujarat Enviro Protection & Infrastructure, Nalco Water, KPMG, Deloitte, EY, CRISIL, Steinem Asia, GWP, DWA, Aqua Consult, PTB, India-EU Water Partnership Project, PFEA interacted with the German expert and discussed on aspects such as paid vs free service, business models, sustainability and legal aspects involved in technology transfers. After the explanations, the stakeholders cross questioned to the expert and sought more details on aspects such as free/paid services and sustainability of the technology platform.

Photographs of First Webinar on 17th December 2019

The images are screenshots from a webinar presentation, each featuring a red '80' logo in the top right corner. The content of the screenshots is as follows:

- Overview of the webinar:** Lists contents of an industrial wastewater technology portal, including core questions (What, Who, Why, How), networks and stakeholders (Regional, National, Supranational, International), examples (Websites, Organisations), drivers and sustainability, and a summary and outlook. It includes a small image of a person at a computer.
- Potential website contents:** Lists technologies (Water & wastewater treatment, Sludge treatment, Transport and storage, Energy, Process control and automation, Monitoring and control, Analytical methods), suppliers of technologies and services, best practices, relevant publications, networks and partners, trainings, events, member area, and contact. It includes a small image of a person.
- Industrial wastewater treatment:** Lists wastewater treatment technologies (effluent treatment plants at company level, common effluent treatment plants for groups of industries), recycle/reuse of treated wastewater, zero liquid discharge technologies (ZLD), conveyance systems for wastewater, sewage sludge management (collection & storage, treatment & disposal), stormwater drainage systems, and wastewater monitoring systems (flow, pollutant parameters, online monitoring). It includes two small images of industrial wastewater treatment facilities.
- Water and wastewater technology portals and networks:** Shows international examples of portals like DWA, Water Europe, and IWA. It includes three small images of these portals.
- DWA Industry Guide:** Shows a screenshot of the DWA website and a book cover titled 'DWA Industry Guide'. It lists information on technologies, suppliers, and consultants, and notes it is published annually as hardcopy with continuous updates and a number of 15,000 copies.
- Best available technologies European Commission's Joint Research Centre:** Shows a screenshot of the BREF website and lists reference documents under the IPPC Directive and the IED. It notes that for each BREF, the following information can be found: specific industrial/subsector in the IEL, technologies and processes used in this sector, current emission and consumption levels, best available techniques (BAT) and emerging techniques, use of references (background material) quoted in the BREF, links to webpages containing relevant legislative standards, and additional technical information.
- Drivers and sustainability of a portal:** Lists demand (Matchmaking between supplier and client: Business to client, Business to business; Networking: local, regional, national, international; Trainings and conferences; Continuing education (postgraduate); Research and innovation; Publications; Guidelines and design standards; Reports) and operation and sustainability (Public vs private; Update information; Financing options: Advertising, Subscription (client pays), Payment per single item (client pays), Open-source (supplier pays), Membership (additional services), Part of networking organisation, Public funds).

- **18 December 2019:** A meeting was held between M/s GeoStone and Gujarat Pollution Control Board (Dr. D.S. Sharma, Senior Officer) at GPCB Regional Office in Surat, Gujarat. During the discussion, Dr Sharma suggested that the proposed technology platform should act as a knowledge sharing platform and enable to interact with different parties/stakeholders for the benefit of State Pollution Control Boards and others.

- **05 January 2020:** A meeting was held between M/s GeoStone and the German-Swedish Environmental Business Delegation under the leadership of Dr. Schmitt and Mr. Lars Hammar at Hotel Taj Mansingh, New Delhi. During the discussion, the delegates expressed their interest in the technology platform and requested to include the Swedish companies (e.g. technology providers, technology seekers, chambers, networks) in the technology platform. The delegation shared that they had relevant technologies for Indian companies for treating wastewater and managing industrial processes efficiently and affordably.

Photographs of Meetings with Swedish-German Delegation at New Delhi



- **06 January 2020:** The second online webinar was organized by M/s GeoStone to discuss the proposed concept and design of Industrial Wastewater Technology Platform. In this online discussion, 35+ stakeholders including organizations such as DSIIDC, NMCG, SIIDCUL, UKEPCB, World Bank, CSE, Development Alternatives, CII, FICCI, ASSOCHAM, Amity University, Delhi University, IIT Delhi, TERI University, MEPPL, Aquatech Systems, Doshion, Earth Water, Gujarat Enviro Protection & Infrastructure, Nalco Water) actively participated and given the inputs. During the online interactions, the following 5 points were put forward by stakeholders on the Industrial Wastewater Technology Platform:

1. Compatibility of platform on web and smart phones
2. Enforcement/Regulatory agencies' advisory information
3. Documents helpful in environment compliance and pollution reduction
4. Networking among Indian and international companies
5. Opportunities for service providers/seekers.

Photographs of Second Webinar on 06th January 2020



Opportunities Through Industrial Wastewater Technology Platform

Moderator:
Mr. Ashish Kumar
Technical Advisor, SEIP-II
ashish.kumar@giz.de

Presenter:
Mr. Trushit Ghosh
Managing Partner, GeoStone Incubation
trushit.ghosh@giz.de

Sustainable and Environment-Friendly Industrial Production (SEIP-II)

Prepared by: **GeoStone**

IWWT - Focused Areas

- Recycle/reuse of treated wastewater.
- Zero liquid discharge technologies (ZLD).
- Conveyance systems for wastewater.
- Sewage sludge management (collection, storage, treatment, disposal).
- Storm water drainage systems.
- Wastewater monitoring systems (flow, pollutant parameters, online monitoring).

Prepared by: **GeoStone**

IWWT – Stakeholders Consultations

- IWWT Suppliers - India, Germany & Europe
- Industries & Industries Associations
- CETPs and member units
- Chambers of Commerce & Apex Organizations
- Law Makers & Regulators
- Academia
- Research Institutes / Organizations

Prepared by: **GeoStone**

IWWT – Domain

www.wwtp.in

WWTP
WASTE WATER TECHNOLOGY PLATFORM

Prepared by: **GeoStone**

IWWT – Static content

- About the Portal
- About SEIP-GIZ / IWWT Portal
- Objectives of Platform
- Team members and Associates
- Confidentiality Declaration as per EU Article
- European BREF reports

Prepared by: **GeoStone**

IWWT – Dynamic content

- Brief of WWTs
- European BREF Links
- Updates on Technologies
- Innovations Corner
- Academia / Research Corner
- Upcoming Events – Expos / Others

Prepared by: **GeoStone**



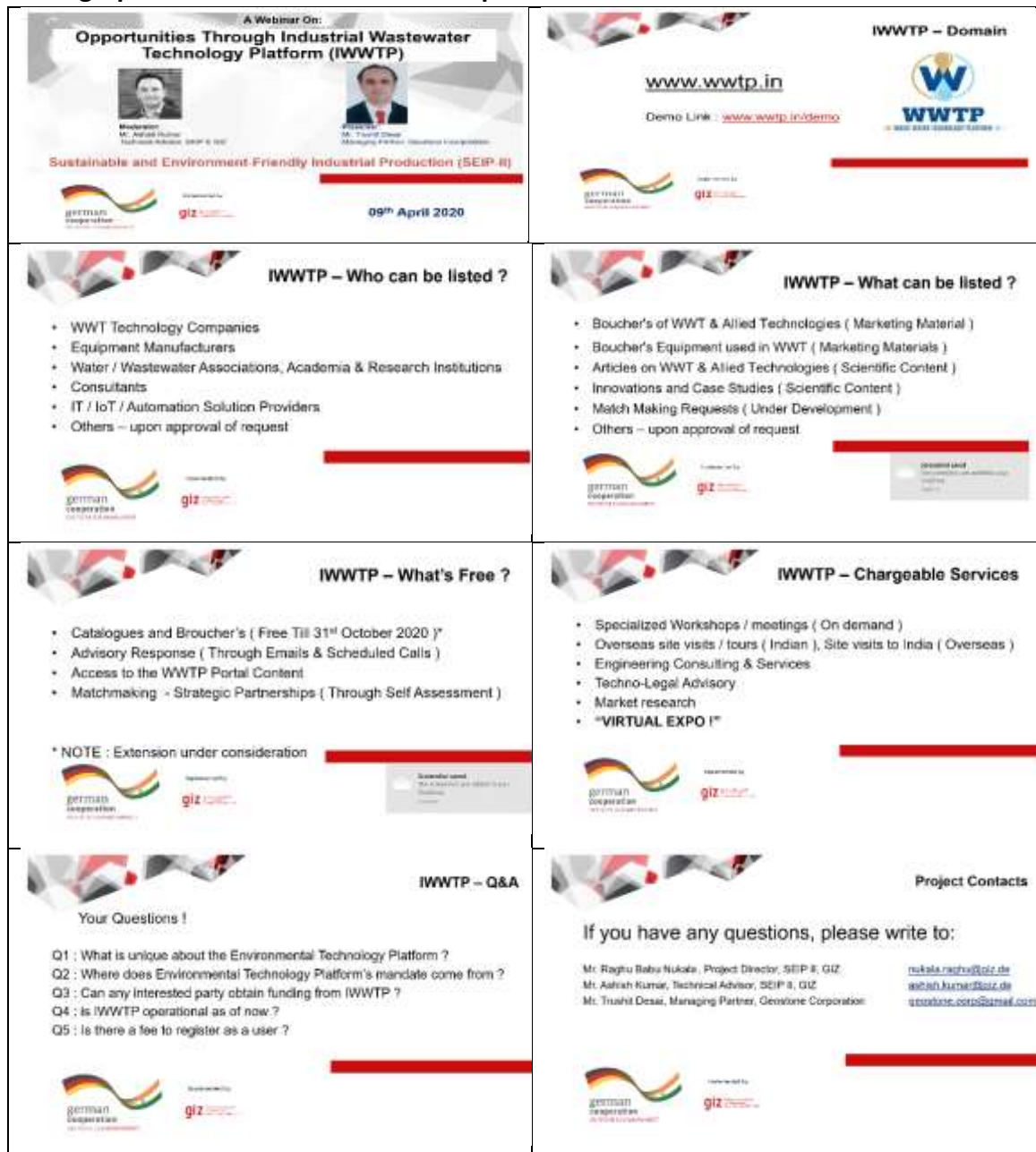
- 22 January 2020:** A meeting was held between GIZ and CPCB (Mr. Sudhakar) in his cabin in CPCB. GIZ shared the scope and progress made by the national consultant M/s GeoStone. It was shared with CPCB that the Industrial Wastewater Technology Platform would be transferred to an eligible company for operations in October 2020, for that CPCB and GIZ would jointly select the eligible company. It was discussed in the meeting, in case no eligible company found, Geostone could own this and operate with market-based model.
- 27 January 2020:** A meeting was held between GIZ/Geostone and CPCB (Mr. V.P. Yadav), Mr Trushit Desai, Managing Partner, Geostone Corporation shared the progress on the need assessment and development. Mr Yadav said that the technology platform should be continued even after the SEIP II project closure, this activity should not be an experiment for the short term.

Photograph of the meeting at CPCB, New Delhi on 27th January 2020



- **18 February 2020:** A meeting was held between GIZ and CPCB (Mr. A. Sudhakar, Mr. V.P Yadav, Mr P.K. Gupta, Dr K. R Ranganathan, Mr. Ram Babu, Mr. A.K. Tripathi) in the 2nd Floor, Conference Hall, CPCB. During the meeting, CPCB (Mr. Sudhakar) shared that the Environmental Technology Platform is a priority area for them. He said that CPCB would provide guidance and necessary support to the consultant “Geostone”, however the platform should be hosted and operated independently by the consultant. At the end of the contract, a non-binding letter/agreement for its transfer would be signed between CPCB and Geostone.
- **09 April 2020:** The Third online webinar was organised for outreach to stakeholders and their comments and suggestions on Content and Services of IWWTP Platform. 140+ Representatives attended the webinar and actively participated in the scheduled topics for discussion. Major agencies that participated were e.g. .CPCB, SPCBs, NMCG, GCPC, GPCB, SMCB, CEE, FICCI, CII, AHK, Gopa Infra, ETC Engineering, CSE, India-EU Water Partnership, Industry Associations, ISLE Utilities, Enviu, TWIC, MEPPL, GETP CETP, Pandesara CETP, NABL, CETP Societies, SFC & Intergeo, Waterex, EMO, SCET, Jilo Group, Engineering Services, ENPRO, ENVIU, MSPL, C-Utility, iFish, TPHT, Amity University, Delhi Universities, CWM. During the webinar, Industrial Wastewater Technology Platform’ concepts and progress was presented with more details on content of the portal, services through the platform, operational procedures, membership benefits, services to non-members, free and paid services, regular updates through the platform, IWWTPs vision during and post COVID-19 pandemic, Online Exposition, upcoming services and inclusion of Stakeholders’ comments and suggestions. During the discussions, companies/individual experts showed interest and obtained information to become the member of the upcoming technology platform.

Photographs of Third Webinar on 09th April 2020



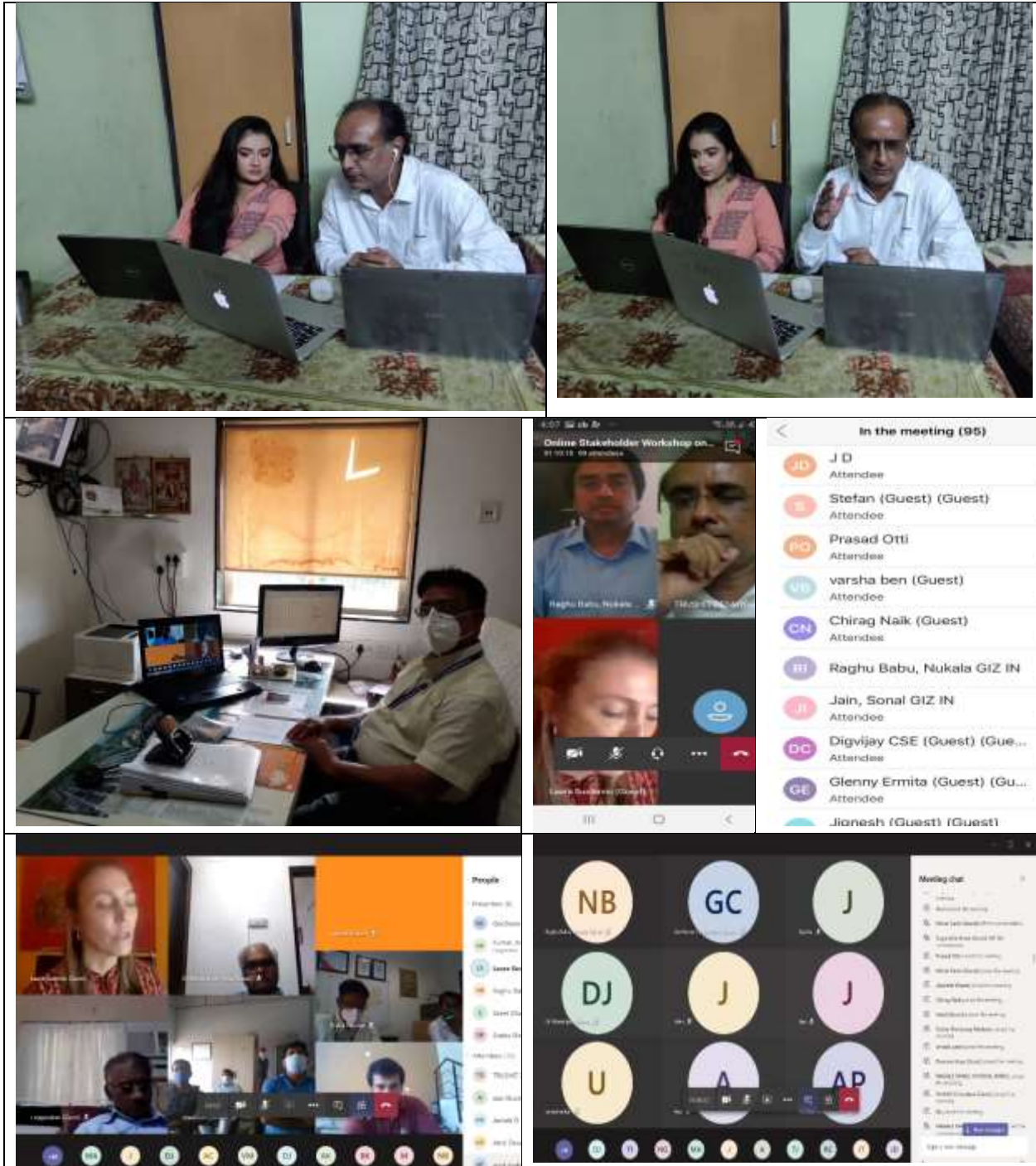
△ Stakeholder Consultation Workshops:

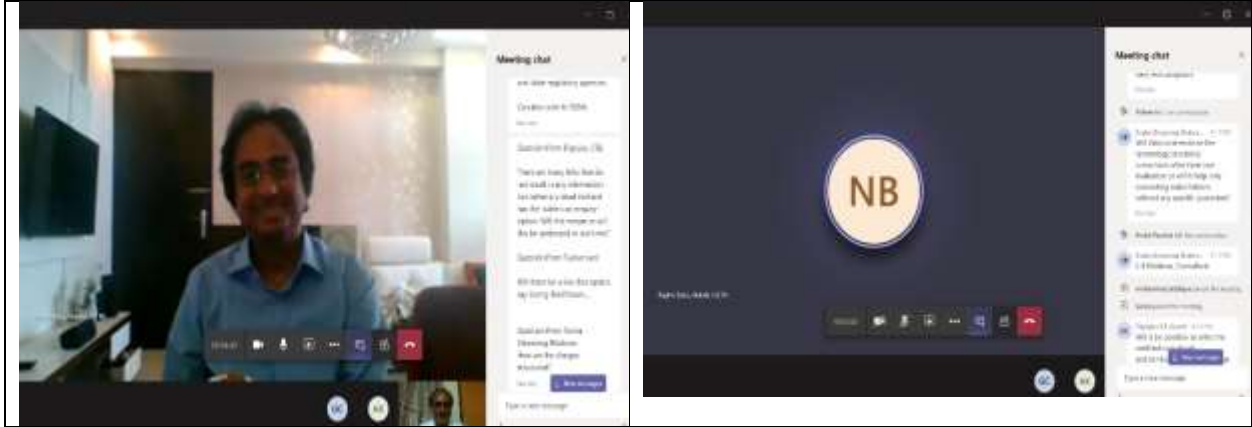
- **01st November 2019:** The first stakeholder consultation workshop was organized for sharing and discussing the findings of baseline studies conducted for Output 2 of SEIP II by Deloitte. In this workshop, CPCB (Mr. Sudhakar, Mr. V.P. Yadav) attended the workshop, the topic of Technology Platform was presented to stakeholders (CPCB,

NMCG, SCGJ, NIC, DSIIDC, SIIDCUL, BIADA, World Bank, UKPCB, IITs, Amity University, Delhi University, World Bank, Okhla CETP Manager, TERI, FMC, CII, FICCI, ASSOCHAM, PHDCCI, Indo-German Chamber of Commerce, CSE, Development Alternatives, India-EU Water Partnership Project, Ernst & Young, CRISIL, NPC, Knowledge Lens) for setting up the Industrial Wastewater Technology Platform for India.

- **22 November 2019:** The second stakeholder consultation workshop was organized for sharing the details and recommendations of baseline studies conducted for Output 2 of SEIP II by Deloitte. In this workshop, the topic Industrial Wastewater Technology Platform was presented again with more details along with international best practices with key stakeholders (e.g. NMCG, SCGJ, NIC, DSIIDC, SIIDCUL, BIADA, World Bank, UKPCB, IITs, Amity University, Delhi University, TERI, FMC, CII, FICCI, ASSOCHAM, PHDCCI, Indo-German Chamber of Commerce, CSE, Development Alternatives, India-EU Water Partnership Project, Ernst & Young, CRISIL, NPC, Knowledge Lens). The stakeholders agreed to take up this activity under the SEIP II.
- **18 June 2020:** An Online Stakeholder Workshop on Gaps/Needs Assessment was conducted in which 125+ participants attended and given the inputs. GIZ's consultant, M/s Geostone, presented the gaps, needs and international case examples on Industrial Wastewater Technology Platform. The major organizations present in the workshop included CPCB, SPCBs, NMCG, GCPC, GPCB, SMCG, CEE, FICCI, CII, AHK, Gopa Infra, ETC Engineering, CSE, India-EU Water Partnership, Industry Associations, ISLE Utilities, Enviu, TWIC, MEPPL, GETP CETP, Pandesara CETP, NABL, CETP Societies, SFC & Intergeo, Waterex, EMO, SCET, Jilo Group, Engineering Services, ENPRO, ENVIU, MSPL, C-Utility, iFish, TPHT, Amity University, Delhi Universities, CWM. The participating organizations were provided with draft reports in advance and their comments/suggestions were collected during the workshop deliberations. The finalized Gaps/Needs Assessment report will be submitted with this progress note.

Photographs of Online Workshop on 18th June 2020





Photographs of other consultative events and review meetings for IWWTP Project



In addition to consultations and workshop, Following Stakeholders consultation were also completed in order to receive inputs from stakeholders

Date	Stakeholders	Major Issues Discussed
22.11.2019	SEIP, Consulting Agencies, BIADA, UEPPCB	General Framework
30.11.2019	CETPs of Sachin and Pandesara, Surat	ZLD Technologies
30.11.2019	Jaeger Umweltechnik & IM Zizmann, Germany, Indian representatives	Issues of B2B and B2C for promotion of German WW Technologies in India
05.12.2019	Naturetech, India	Promotion of German Technologies in India, B2C
05.12.2019	Mr Vishal Parekh, Consultant, India	Knowledge sharing of BAT from Germany for implementation in India
05.12.2019	GITAAR, India	Training Aspects, Sustainability of German WWT in India
18.12.2019	SVNIT – KD Yadav, PV Bhale	Engagement of Academia, Technology Vetting Programs, Applied Research, Training Programs, Energy Efficiency in WWTP
18.12.2019	Pollucon – HM Gandhi, MB Gandhi, DM Gandhi	Engagement of Environmental Laboratories and Consultants
18.12.2019	BWRC – MSH Sheikh	Engagement of NGOs
20.12.2019	MEPPL – Nimal Vashi	Common Environmental Infrastructure, ZLD Technologies
24.12.2019	Mangalam Drugs-CK Naik	Advanced Oxidation based WWT Technologies for Pharma Industries
25.12.2019	KD Inds – Kinnari Naik	ZLD Requirements, Sludge Minimization Technologies, Consultants' database
26.12.2019	ENPRO – DJ Naik	ETP Audits, Services for Env Laboratory Accreditation, ETP Design & Engineering, CETP related services
28.12.2019	Koch Inds, Europe – Simone Galluzzi	Business development requirements of European Companies
28.12.2019	UKPJN, GoUK – Mamta Varma-AE	Adaptation of Advanced Sludge Management Technologies
10.01.2020	Design of Concept for WWTP Platform – GIZ - Team	For concept and structure of WWT-Portal
10.01.2020	Interactions with SEIP Consultants	WEBINAR Stakeholder Consultation
21.01.2020	GWP Member Representative	GWP Participation

23.01.2020	Meetings + Webinar with Apex Industries Associations –CII, AHK Internal meeting at SEIP/GIZ	Initial Meetings to understand requirements/expectations of Apex Industries Associations
24.01.2020	Meeting with FICCI, NMCG, MoJS, Hotel Lalit MoEFCC CPCB Webinar – GIZ SEIP, Prof Hartwig	Introductory meeting with Stakeholders CPCB Water Division, IT Division Webinar attended
02-03.03.2020	GIZ SEIP, New Delhi	Internal Review of Portal

Following Event have been planned as a part of stakeholder consultation process, -

Stakeholder consultation is a continuous process all along the project life cycle of IWWTP Portal and GeoStone is in a process of receive suggestions of stakeholders on future consultation and outreach activities of the IWWTP Platform. Based on request and suggestions of stakeholders, following activities / programs have been planned as a part of continuous consultation process

Date	Stakeholders	Major Issues to be Discussed
Dec-2019/Oct-2020	Start of Facilitation to German WWT Companies for support on B2B, B2C services (Pilot Project)	For implementation of BAT in state of Uttarakhand (Already started) – Started*
Oct-2020	GWP, BMWi delegation to India	Presentation of IWWTP Portal and services for Wastewater Companies and Stakeholders. Facilitation to delegation members for B2B meetings and site visits, if requested
Nov/Dec-2020	Visit to Germany	Facilitating B2B services for German Technology Supplier & Indian strategic partners *
July/August-2020	SEIP-II / GIZ	Launch of WWT Platform
September 2022	IFAT-Munich	One to One interaction with German / European WWT Technology Suppliers for facilitation through WWT-Platform* (Event Postponed from May-2020 due to COVID-19)

Note : * : Event have been rescheduled or may be rescheduled in compliance with prevailing guidelines of COVID-19 pandemic

5.0 STUDY AND REVIEW OF SIMILAR PLATFORMS

As a process prior to designing the portal and content of proposed portal for IWWTP Platform, a number of Indian and internationally renowned and successful platform portals were reviewed and studied in depth – for their design, layout, content, services through portals, operational and management mechanism, data protection policies, outreach programs and financial income aspects of a portal. All the renowned portals and platforms offers a unique set of services and benefits to their stakeholders.

A brief compilation of national and international portals referred, and studies are presented below through a set of photographic impressions.

Photographic Images of Portal Interfaces

		
<p>DWA- Germany</p>	<p>Water Europe-EU</p>	<p>IWA-International</p>

Some other important portals studied are - Aquatec Trade – The Netherlands, India Water Portal – India, Water Online – USA, Asia Water – Malaysia, StePP – UNIDO, EIPPCB – Europe (BREFs), Cluster Collaboration – EU, W&WT – UK, Trade Expos – IFAT, AQUATECH. Some of the photographic images are presented on following page

Photographic Images of Portal Interfaces – Indian and International



Aquatech Trade - Netherlands



IWP - India



Water Online - USA



STePP- UNIDO



EIB - EU



Cluster Collaboration - EU



W&WT - England



IFAT – Germany / Intl.



Aquatech – NL / Intl.

6.0 OUTCOME & RECOMMENDATIONS:

In the course of discussions with the various stakeholders, particularly the industries and industry associations; they have expressed their keen interest in patronizing the GIZ initiative of developing a Technology Platform to facilitate and sustain a host of commercial services, knowledge services, as well as B2B and B2C services. Industry Sector being one of the most prominent and promising sectors needs to be fostered for growth; however, without compromising on ecological sustainability. This can be done by advocating appropriate advisories and business combinations through Industrial Waste Water Technology (IWWT) Platform.

Promotion of IWWT platform has emerged as a critical need within industry - water nexus in recent years. This has become critical due to cascading of certain factors, leading to increasing vulnerability to water intensive industries, particularly with respect to their sustainability and associated business continuity risks. The WWT platform would also be designed to provide a forum for strategic partnerships with other organizational actors (e.g., NGOs, intergovernmental agencies, universities, trade associations, and other businesses) for proactive and creative engagement of all the stakeholders concerned. Proposed interventions of IWWTP are expected to result in increased compliance of Industries and wastewater generators towards their regulatory obligations vide meeting stipulated norms as well as to reduce water pollution across the water cycle.

Developing partnerships with like-minded organizations both national and international will help to provide momentum to promotion of Waste Water Technologies, Innovations and Incubate brilliant ideas, connect with Academia. Leveraging local knowledge and social capital will be another important area especially for implementation of pilot / demonstration projects.

Industry Associations, Research institutions, Capacity development agencies, certification agencies like NITs, IITs and civil society organizations will provide an opportunity to have a multiplier effect which can facilitate creating visibility and acceptability among stakeholders. It will also bring in an attitudinal change in the way the stakeholders value wastewater treatment. This will be important to benefit from years of experience, gain other ideas and perspectives, enhance credibility and legitimacy, increase leverage, and pool resources to address shared risks.

7.0 DEVELOPMENT OF PORTAL:

The Beta version of the portal has been developed and GIZ SEIP was informed on 8th March 2020 about readiness of the portal for internal review. The Beta Version of Portal is presently hosted at www.wwtp.in/demo before its launch at www.wwtp.in

The IWWTP Platform's front face – The IWWTP Portal has been designed and developed in strict compliance with the European and German Data Protection Directives as well as Indian Information Technology Act 2001. The information and disclaimers in this regard have been exhibited on the portal itself for the information of all.

A brief report on internal tests has been prepared, the summary of tests and results are presented below, -

1. Accessibility from Devices – Tested OK for Laptops, Desktops, Smartphones, Tablets and Smart TVs
2. Broken Links – NIL, Tested OK
3. Multiuser Simultaneous Testing (MUST) – Tested for 41 log-ins at the same time – Tested OK
4. Accessibility across continents – Tested OK. Tested from USA-Chicago & Houston, Canada-Toronto, Germany-Frankfurt & Munich, England – London & Manchester, The Netherlands, Sweden, Spain, Italy, France, Singapore, Australia, New Zealand, UAE, Qatar, Oman & South Africa (Tested through associates)
5. Compatibility with Multiple Browsers – Tested OK, for IE, Google Chrome, Firefox & Opera browsers
6. Google Page Speed Score – 99
7. Maximum Load time – 3.8 Seconds in India (In USA and Europe its less than 2 seconds)

Furthermore, Financial Plan for Operation and Maintenance of Portal for 3 years post contract period (from October 2020 to September 2023) was submitted by GeoStone

8.0 OUTREACH PROGRAMS:

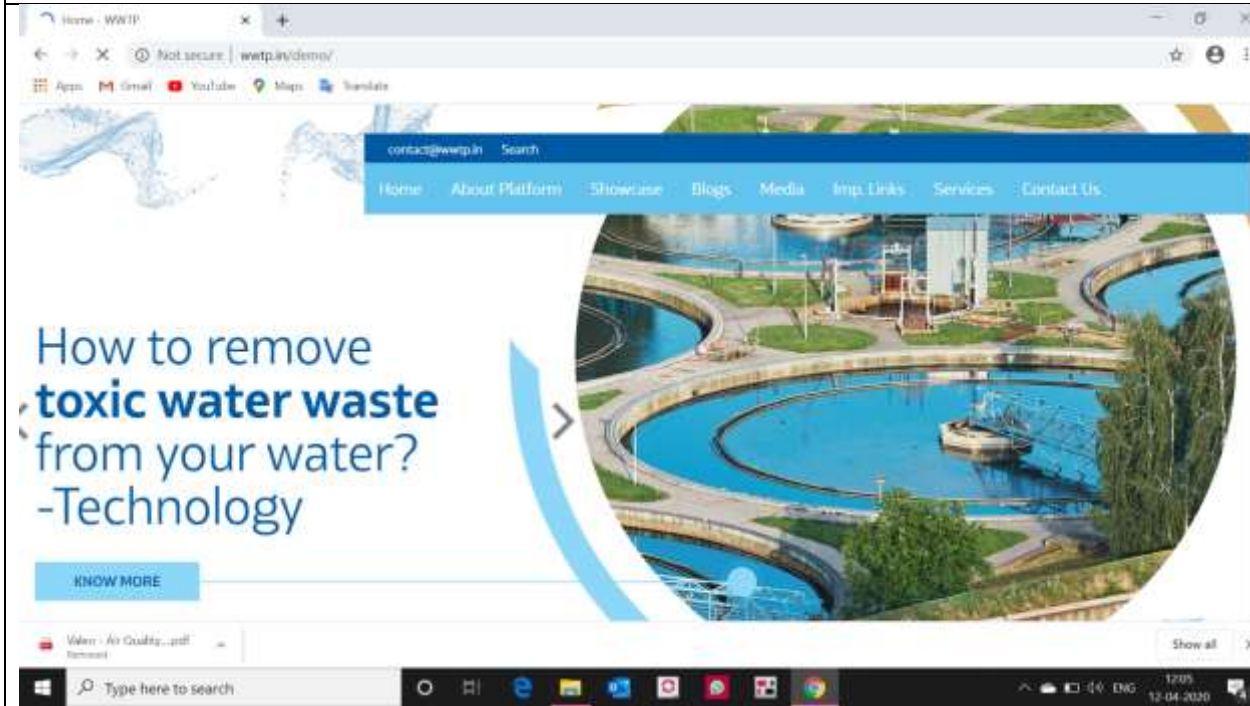
Due to the restriction imposed by Government of India through various directives as well as advisories of GIZ India office to combat COVID-19 Pandemic, activities requiring physical meetings, travelling, workshops and seminars etc. were temporarily halted. The outreach programs planned at IFAT-2020 at Munich as well AQUATECH-2020 at Shanghai were postponed due to postponement announcement of Expositions.

However, in order to proceed with Outreach activities for the WWTP Platform, Webinars and Workshops were organized on 09th April 2020 and 18th June 2020 inviting German, Other European, Indian & other stakeholders / participants to start engagement process with the beneficiary stakeholders. Both Online programs recorded more than 110 participants across the

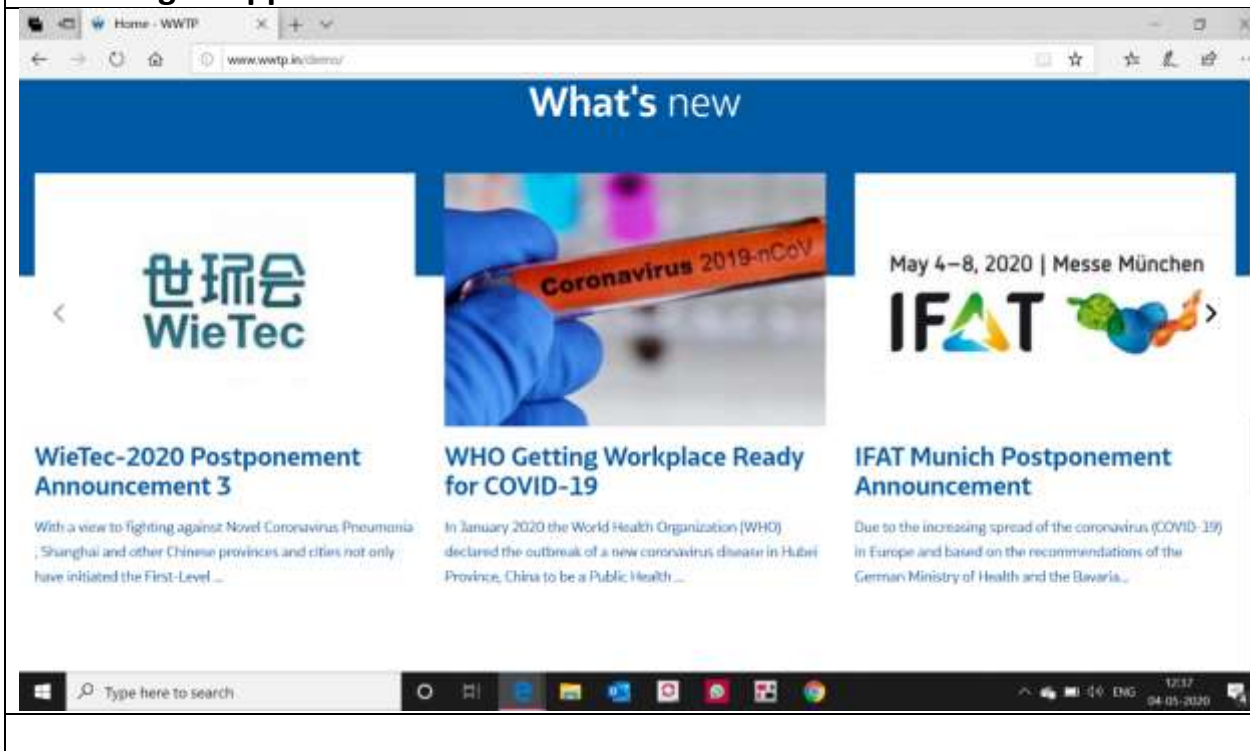
world with later program having recorded participation and interest from more than 16 countries spanned over Europe, Asia, Africa, Oceania and American continents

9.0 GLIMPSES OF PORTAL (BETA VERSION)

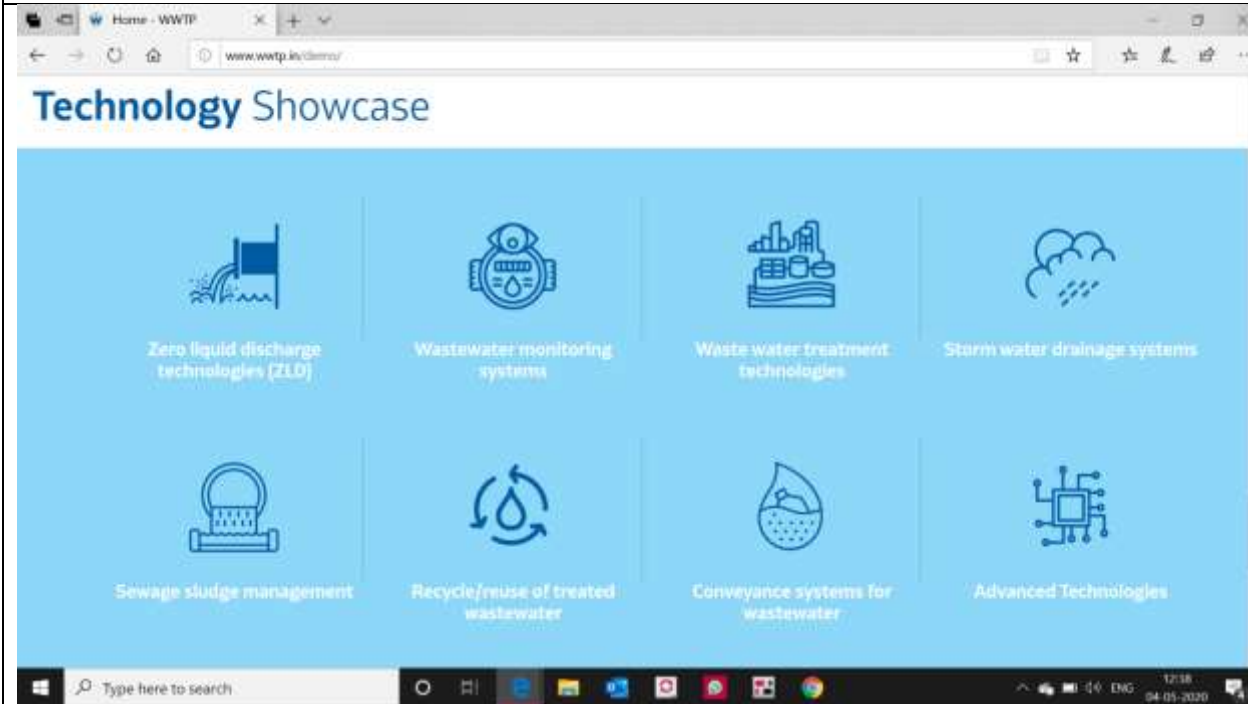
Home Page : Top Section



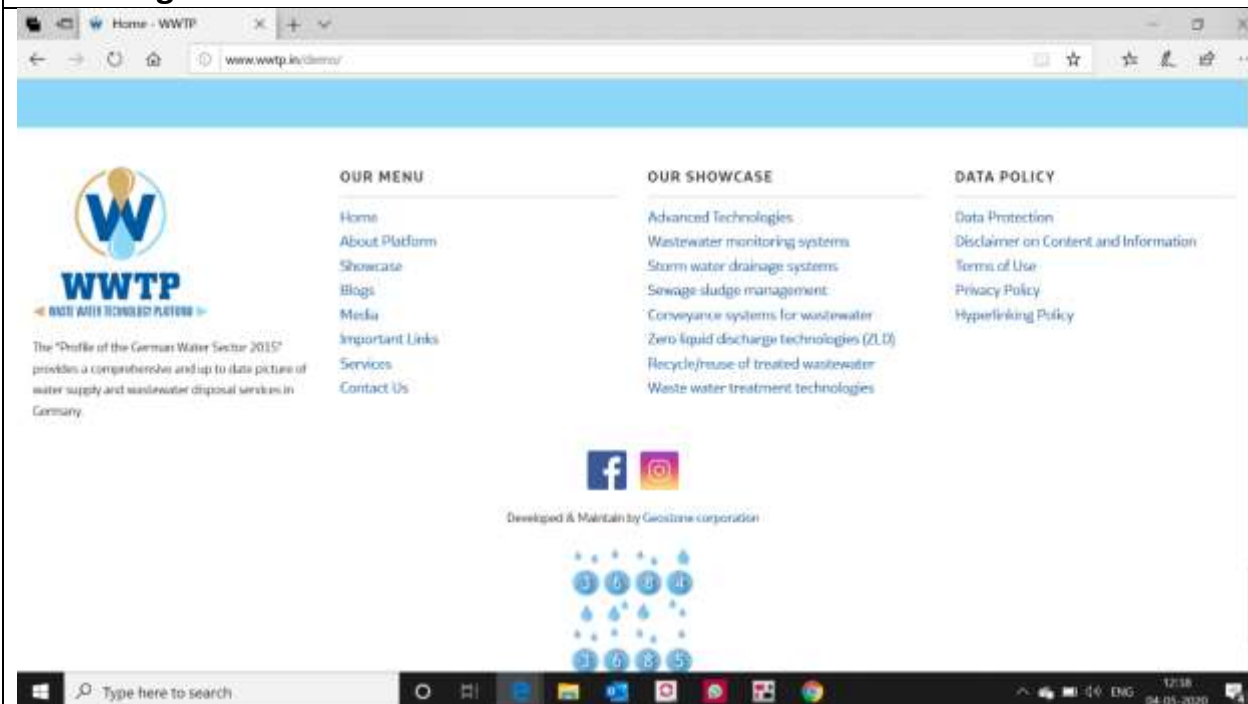
Home Page : Upper Middle Section



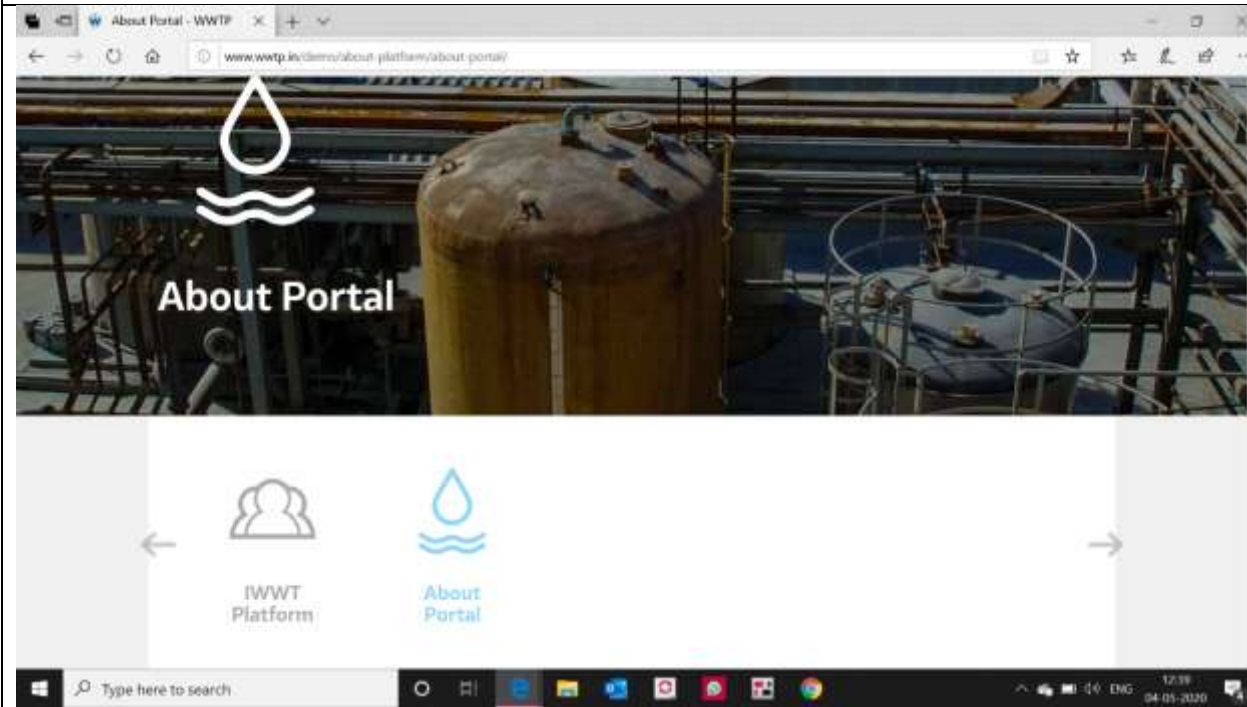
Home Page : Lower Middle Section



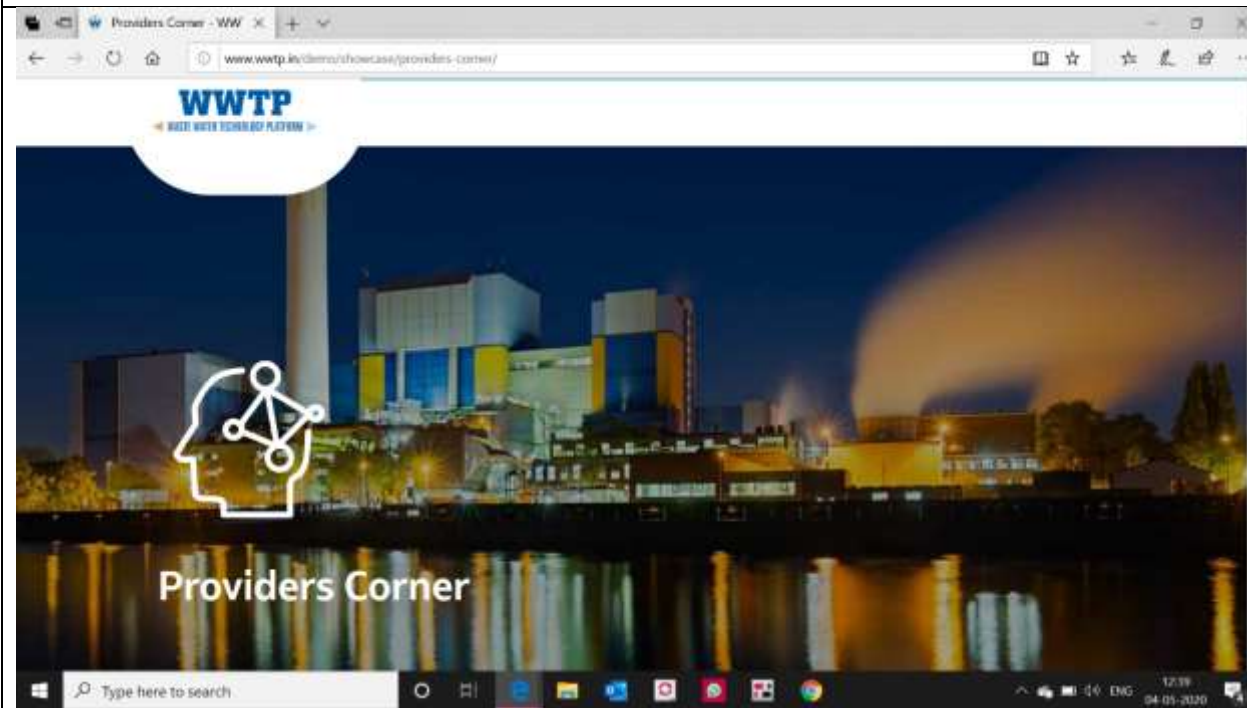
Home Page : Bottom Section



About Portal Section



Showcase Section



Technology Showcase Section

The screenshot shows a web browser window with the URL www.wwtp.in/demos/showcase/providers-corner/. The page features five technology categories, each with an icon and a label: Zero liquid discharge technologies (ZLD), Wastewater monitoring systems, Waste water treatment technologies, Storm water drainage systems, and Sewage sludge management. Below these categories is a paragraph of text about GIZ's mission and services.

As a service provider in the field of international cooperation for sustainable development and international education work, GIZ is dedicated to shaping a future worth living around the world. GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. The diverse expertise of our federal enterprise is in demand around the globe – from the German Government, European Union institutions, the United Nations, the private sector and governments of other countries. We work with businesses, civil society actors and research institutions, fostering successful interaction between development policy and other policy fields and areas of activity. GIZ's main commissioning party is the German Federal Ministry for Economic Cooperation and Development (BMZ).

The commissioning parties and cooperation partners all place their trust in GIZ to work with them to generate ideas for political, social and economic change, to develop these into concrete plans and to implement them. Since GIZ is a public-benefit federal enterprise, German and European values are central to GIZ's work. Together with GIZ's partners in national governments worldwide and cooperation partners from the worlds of business, research and civil society, GIZ work flexibly to deliver effective solutions that offer people better prospects and sustainably improve their living conditions.

Blogs Section

The screenshot shows a web browser window with the URL www.wwtp.in/demos/blogs/. The page displays several blog posts and advertisements. The main content includes:

- WieTec-2020 Postponement Announcement 3**: A post with the WieTec logo and text about the postponement of the event.
- WHO Getting Workplace Ready for COVID-19**: A post featuring a hand holding a test tube labeled 'Coronavirus 2019-nCoV' and text about WHO's declaration of the outbreak.
- IFAT Munich Postponement Announcement**: A post with the IFAT logo and text about the postponement of the IFAT Munich event.
- IEexpo 中国环博会**: An advertisement for the IEexpo China Environmental Expo, presented by IFAT.
- BE A RESPONSIBLE CITIZEN... SAVE THE Environment.**: An advertisement for Envirotech Asia, featuring a green leaf and text about environmental management solutions.

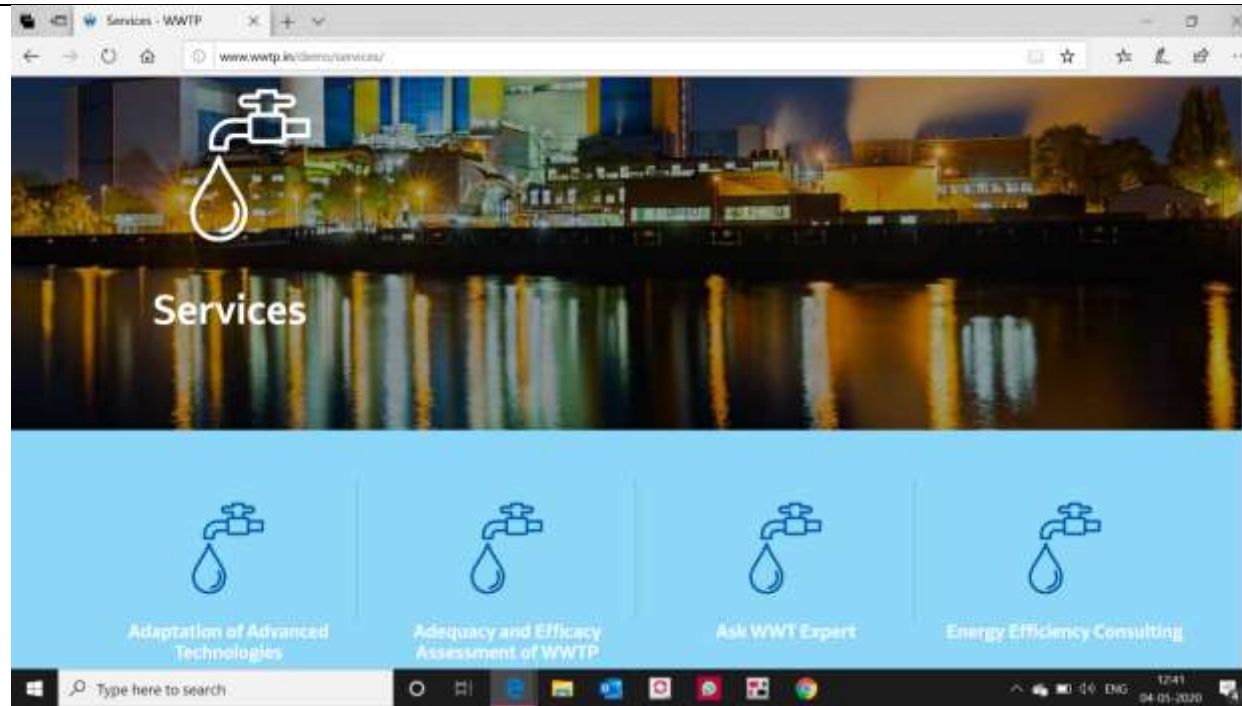
Media Section

The screenshot shows a web browser window with the address bar displaying "www.wwtp.in/demo/our-media/". The page features a dark blue header with the word "Media" in white. Below the header is a blue horizontal bar. The main content area is divided into three columns, each with a large image and a title. The first column shows an industrial facility with the title "SEIP Case Studies" and a sub-headline "Environmental management has been a key prerogative in India, both by way of deferment to international treaties". The second column shows a large body of water with the title "Industrial wastewater treatment – Solutions & Waste Water Charges". The third column shows a large circular industrial structure with the title "SUSTAINABLE AND ENVIRONMENT-FRIENDLY INDUSTRIAL PRODUCTION". The Windows taskbar at the bottom shows the search bar and various application icons.

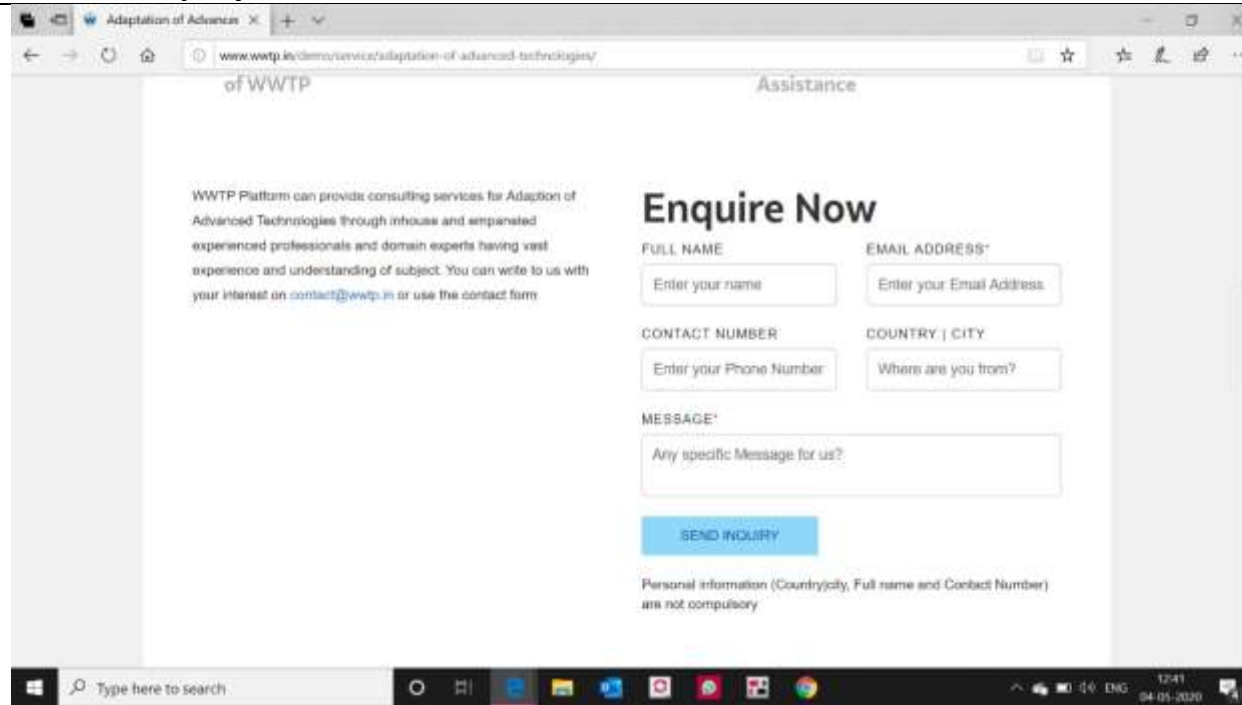
Important Links Section

The screenshot shows a web browser window with the address bar displaying "www.wwtp.in/demo/important-links/". The page features a dark blue header with a white network icon and the text "Important Links". Below the header is a light gray horizontal bar. The main content area is divided into four columns, each with an icon and a label: "Germany / Europe" (European Union flag), "India" (map of India), "International" (globe), and "Water Portal & Platforms" (cloud and person icon). The Windows taskbar at the bottom shows the search bar and various application icons.

Services Section



Service Enquiry Form



Contact Us Section

www.wwtp.in/demo/contact-us/

Contact Us

FULL NAME

EMAIL ADDRESS*

CONTACT NUMBER

COUNTRY | CITY

MESSAGE*

For General Queries

For Other Queries

Personal information (Country|city, Full name and Contact Number) are not compulsory

04 May 2020 Monday 12:42 04-05-2020

Details on Data Protection

www.wwtp.in/demo/data-protection/

Data Protection

Data Protection

Data processing is the responsibility of GeoStone Corporation

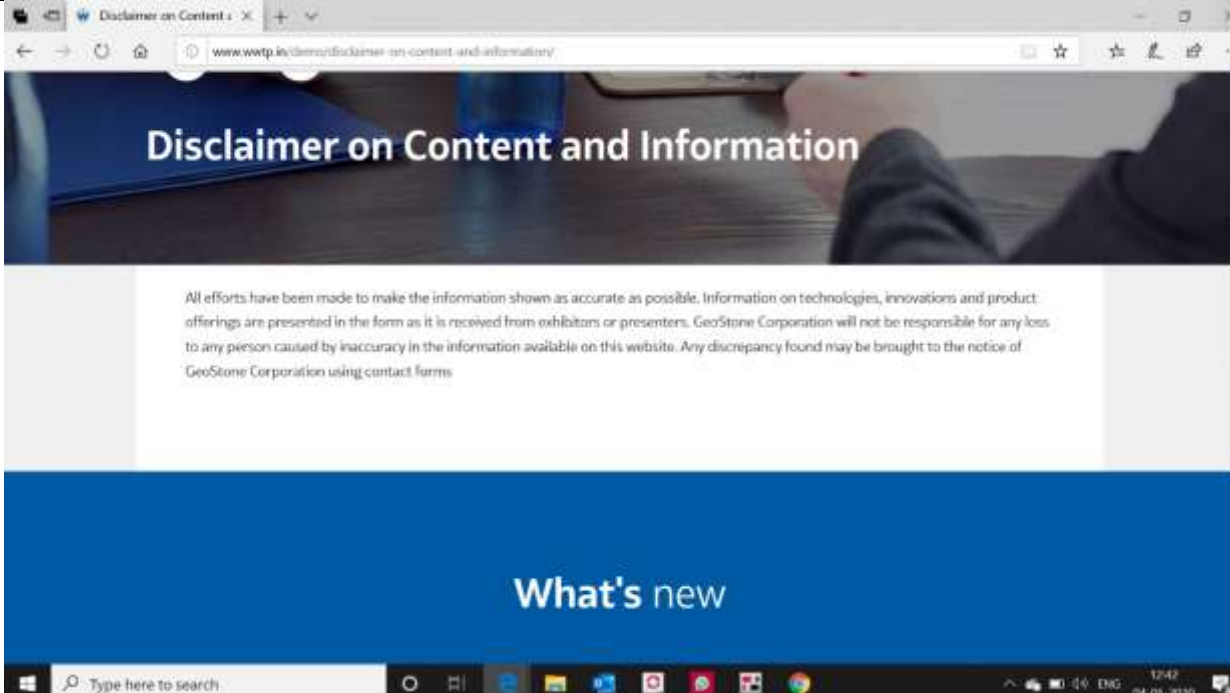
Postal address:
GeoStone Corporation
203,SHIV Flats
Bld H-3 Hospitals
Citylight Road
SURAT-395007 GUJ
India

Contact:
contact@wwtp.in

Contact details of the data protection officer:
Geostone.corp@gmail.com

04 May 2020 Monday 12:42 04-05-2020

Disclaimer on Content



www.wwtp.in/demo/disclaimer-on-content-and-information/

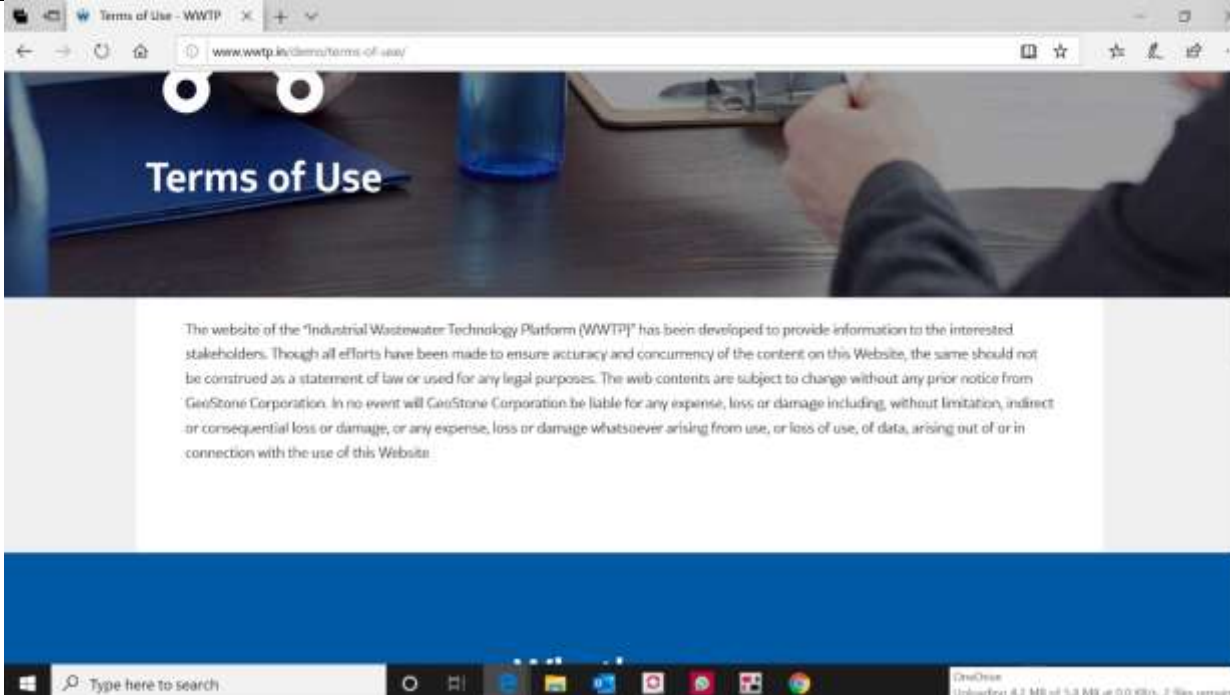
Disclaimer on Content and Information

All efforts have been made to make the information shown as accurate as possible. Information on technologies, innovations and product offerings are presented in the form as it is received from exhibitors or presenters. GeoStone Corporation will not be responsible for any loss to any person caused by inaccuracy in the information available on this website. Any discrepancy found may be brought to the notice of GeoStone Corporation using contact forms

What's new

Type here to search

Information on Terms of Use of Portal



www.wwtp.in/demo/terms-of-use/

Terms of Use

The website of the "Industrial Wastewater Technology Platform (WWTP)" has been developed to provide information to the interested stakeholders. Though all efforts have been made to ensure accuracy and concurrency of the content on this Website, the same should not be construed as a statement of law or used for any legal purposes. The web contents are subject to change without any prior notice from GeoStone Corporation. In no event will GeoStone Corporation be liable for any expense, loss or damage including, without limitation, indirect or consequential loss or damage, or any expense, loss or damage whatsoever arising from use, or loss of use, of data, arising out of or in connection with the use of this Website.

Type here to search

OneDrive
Uploading 4.2 MB of 5.8 MB at 50 KB/s, 7 files remain

Disclaimer on Privacy Policy

Privacy Policy

As a general rule, this website does not collect Personal Information about you when you visit the site. You can generally visit the site without revealing Personal Information, unless you choose to provide such information.

This website may record your visit and logs the following information for statistical purposes - your server's address; the name of the top-level domain from which you access the Internet (for example, .gov, .com, .in, etc.); the type of browser you use; the date and time you access the site; the pages you have accessed and the documents downloaded and the previous Internet address from which you linked directly to the site.

We will not identify users or their browsing activities, except when a law enforcement agency may exercise a warrant to inspect the service provider's logs.

A cookie is a piece of software code that an internet web site sends to your browser when you access information at that site.

No cookies have been used in this website.

Your email address will only be recorded if you choose to send a message. It will only be used for the purpose for which you have provided it and will not be added to a mailing list. Your email address will not be used for any other purpose, and will not be disclosed, without your consent.

If you are asked for any other Personal Information you will be informed how it will be used. If at any time you believe the principles referred to in this policy or statement have not been followed, or have any comments on this policy, please mail the concerned authority.

10.0 STATUS OF IWWTP CONTRACT

(A) Status of Tasks & ToR

Sr. No.	Task / Sub-Task	Status
1	Main Task1: Needs gathering for setting up of the industrial wastewater technology platform	
1.1	<input checked="" type="checkbox"/> Sub-task 1: Identify topics and subtopics for scoping the areas that need to be dealt by the proposed industrial wastewater technology platform. For example, the areas of relevance for the industries	Completed
1.2	<input checked="" type="checkbox"/> Sub-task 2: Identify the stakeholders and beneficiaries of the proposed industrial wastewater technology platform, both national and international	Completed
1.3	<input checked="" type="checkbox"/> Sub-task 3: Make a compilation of some good case examples of available technology platforms nationally and internationally on their scope and functioning to understand the scoping for the industrial wastewater technology platform in India	Completed
1.4	Sub-task 4: Through appropriate means such as personal interviews, surveys, small group workshops etc. with the identified stakeholders, gather the needs for establishing the proposed industrial wastewater technology platform and its scope	Completed
2	Main Task 2: Designing and developing industrial wastewater technology platform	
2.1	Sub task-1: Develop a concept for the e-portal to host the proposed industrial wastewater technology platform, including structure of the e-portal, information to be made available and its various functionalities.	Completed
2.2	Sub-task 2: Develop a concept for operating the e-portal and providing of services such as facilitating information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc.	Completed
2.3	Sub-task 3: Conduct a stakeholders' workshop (upto 1 day) to discuss the proposed concept (as above). Include relevant stakeholders e.g.	Completed through one to one meetings,

	MoEFCC, CPCB, SPCBs, industrial associations, chambers of commerce & industry etc.	Webinars and FGDs
2.4	Sub-task 4: Finalize the concept for developing the e-portal and the services to be provided based on the feedback from the stakeholders and take approval from GIZ	Completed
2.5	Sub-task 5: Develop the e-portal as per the approved concept	Completed
3	Main Task3: Commissioning and operating the technology platform including e-portal and the services	
3.1	Sub-task 1: Commissioning the e-portal in a public domain and operate and maintain the portal. Putting up relevant information (technologies, suppliers, case examples etc.) on the e-portal. Make regular updates to the website including on technologies and other relevant information such as news, event highlights etc.	Portal is commissioned. As of now available at wwtp.in/demo Portal updated till 22nd March 2020
3.2	Sub-task 2: Conduct at-least 4 webinars on industrial wastewater management.	3 Webinars Completed till 09 April 2020
3.3	Sub-task 3: Conduct up to 2 national/regional level workshops to facilitate information exchange with industries on industrial wastewater management and on the Industrial Wastewater Technology Platform	Online Workshop Completed on 18th June 2020
3.4	Sub-task 4: Providing of services such as facilitating information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc. as per demand	Service Delivery initiated
3.5	Sub-task 5: Achieve a significant outreach, which means that a good number of Indian companies and German/International technology providers use the platform regularly.	Ongoing progress. Significant outreach already achieved with interested stakeholders from more than 16 countries
4	Main Task4: Plan for sustainability of the technology platform	
4.1	Sub-task 1:	Preliminary plan prepared and

	Develop a plan for operations of the technology platform beyond the contract period on self-sustaining basis. The plan should include practical suggestions on which company(ies) can take over the developed technology platform on self-sustaining basis	submitted. Detailed plan under preparation. To be submitted in August 2020
4.2	Sub-task 2: To undertake discussions/meetings with CPCB and/or SPCBs or any other relevant agency and finalize the company and location where the Technology Platform can be hosted on self-sustaining basis	Meetings Completed. Formalities under progress
4.3	Sub-task 3: To facilitate smooth transfer of the e-portal to the finalized new operator company	October 2020

(B) Status of Deliverables

Sr. No.	Deliverable / Milestone	Status
1	Report on Main Task 1: Needs gathering for setting up of the industrial wastewater technology platform	Submitted
2	Designing and developing industrial wastewater technology platform	Completed
3	Commissioning the e-portal in a public domain	Completed. E-portal Commissioned and available in public domain wwtp.in/demo
4	Operate and maintain the e-portal	Started for Beta Version. Present Beta version is Operated and Maintained by GeoStone IT team
5	Report on the webinars conducted on industrial wastewater management	3 Webinars Completed

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28th June, 2020