## **Third Report on**

# Cleaner Production Promotional Activities

### Supported by

## Department of Forests and Environment

**Government of Gujarat** 



Submitted by:



Gujarat Cleaner Production Centre Udhyog Bhavan, Gandhinagar

### **Table of Contents**

Sr. No.	Chapter	Page No.
1	Project Background	02
2	Cleaner Production Promotion Programme at Mehsana, dated 03/03/2016	06
3	Cleaner Production Promotion Programme at Veraval Industrial Estate, Veraval, dated 08/03/2016	08
4	Cleaner Production Promotion Programme at Kutch Saurashtra Productivity Council, Rajkot, dated 11/03/2016	11
5	Cleaner Production Promotion Programme at Ankleshwar Industries Association Hall, Ankleshwar, dated 14/03/2016	14
6	Cleaner Production Promotion Programme at Kathwada Industrial Estate, kathwada, dated 16/03/2016	16
7	Cleaner Production Promotion Programme at hotel Four point Shareton, Ahmedabad, dated 19/03/2016	19
8	Cleaner Production Promotion Programme at Narol Industrial Estate, Narol dated 21/03/2016	22



## Third Report on

## **Cleaner Production Promotional Activities**

#### Project Background:

Gujarat has achieved an impressive industrial development since its inception as a state since 1960. The industrial sector at present comprises of huge number of Micro Small, Medium and Large scale of industries. It has 204 industrial estates established by Gujarat Industrial Development Corporation (GIDC). The strengths of the industries lie in its Small and Medium Enterprises (SMEs).

The industrialization brought economic prosperity to the state, but also resulted in the deterioration of environment. It was realized that taking reactive steps was not a proper answer to pollution control, but there is a need of 'Proactive' step which can prevent the generation of pollutants; rather than treating the generated waste at the End-of-Pipe. Cleaner Production is the preventive approach for the environmental pollution.

Cleaner production is a preventive environmental protection initiative, which emphasizes on reduction of generation of wastage; rather than to treat the generated waste. It is intended to minimize waste and emissions and maximize product output. By analyzing the flow of materials and energy, options to minimize waste and emissions out of industrial process through source reduction strategies are identified. Implementation of Cleaner Production helps to reduce the use of materials and energy, and to avoid waste, waste water generation, and gaseous emissions, and also waste heat and noise and provides better choices for improved processes.

Cleaner production concepts have consequences for the whole life cycle of a product and can foster improvements in product design, selection of raw materials, and efficiency in production and/or energy use, safety during manufacture and consumer use, reparability and recyclables. The cleaner Production strategy is in full compliance with the concept of sustainable development.

Gujarat Cleaner Production Centre, established by the Department of Industries and Mines, Government of Gujarat; has been proactively engaged in the promotion and implementation of Cleaner Production in various industrial sectors of Gujarat since its inception in 1998. So far, GCPC has conducted more than 200 CP Assessments in various sectors like chemical, dyes & intermediates, pulp & paper, dairy, textile, electroplating, fishery, stone crushing, bentonite manufacturing and service sectors. Though, by this time many industries have shown interest in CP, however, the implementation and demand has not been generated from the industries. Therefore, it is necessary to make industries aware about CP continuously. To motivate the industries, Department of Forests and Environment, Government of Gujarat has initiated for Proactive Concepts and supporting in implementation of Cleaner Production. As a part of this activity, Forests & Environment Department assigned a project to conduct Promotion Programme on Cleaner Production in various industrial sectors of Gujarat to Gujarat Cleaner Production Centre.

The main objective of the Promotion programme is to spread awareness on Cleaner Production in different sectors and to develop understanding of CP concept and its linkages in achieving overall environmental improvement and compliance.

This Third Report on Cleaner Production Promotional Activities includes the progress of the Cleaner Production Promotion Programme at Industrial Estates covering the period from February 2016 to March 2016.

#### **Cleaner Production Promotion Programme:**

Cleaner Production Promotion Programs at various industrial estates were conducted as below.

- 1. Cleaner Production Promotion Programme at Mehsana, Dated 03/03/2016
- Cleaner Production Promotion Programme at Veraval Industrial Estate, Veraval, Dated 08/03/2016
- 3. Cleaner Production Programme at Kutch Saurashtra Productivity Council, Rajkot, Dated 11/03/2016
- 4. Cleaner Production Promotion Programme at Ankleshwar Industries Association Hall, Ankleshwar, Dated 14/03/2016
- 5. Cleaner Production Promotion Programme at Kathwada Industrial Estate, Kathwada, Dated 16/03/2016
- 6. Cleaner Production Promotion Programme at Four Point Shareton, Ahmedabad Dated 19/03/2016
- 7. Cleaner Production Promotion Programme at Narol Industrial Estate, Narol Dated 21/03/2016

#### Preparation of Promotion Programme:

Though to conduct Promotion Programme on Cleaner Production is a routine activity, but for this project an exclusive team of senior officials from GCPC have been formed under direct supervision of Member Secretary, GCPC. A descriptive presentations covering following themes have been prepared:

#### Industrialization & CP

- Industrial Scenario of Gujarat
- Measure for Environment Protection (End of Pipe) Treatment & Disposal
- Concept of CP
- Establishment and activities of GCPC
- Support by Department of Forests and Environment

**CP** Tools

#### **CP** Methodology

#### Success Stories of CP in -

- Textile Sector
- Chemical Sector
- Dyes and Dyestuff Sector
- Pharmaceutical Sector
- Electroplating Sector
- Recycle Paper Sector
- Pulp and paper sector
- Service Sector like Hotels & Hospitals
- Foundry Sector
- Stone Crushing Sector
- Bentonite Sector
- Fish Processing Sector

#### **Financial Assistance**

• Scheme of financial assistance for CP Implementation under Gujarat Industrial Policy – 2015 of Industries Commissionerate, Government of Gujarat

An environment friendly Jute Bags were distributed to all participants, consisting of:

- CD comprising of following things:
  - ✓ Guidelines on Cleaner Production Implementation in various sectors, Posters, Cleaner Production Booklets prepared by GCPC.
  - ✓ Schemes of financial assistance under Gujarat Industrial Policy 2015 of Industries Commissionerate, Government of Gujarat.
  - ✓ Copy of PowerPoint Presentations
- Writing Pad made of Recycled Paper
- Pen
- Programme Schedule

The details of the Promotion programme are given in the following pages.



Title:	Cleaner Producti	on Promotion Progr	amme at N	lehsana.
Events Details				
	Date	Place	Details	Contact Details
	3 <sup>rd</sup> March,	Mehsana.	Gujarat,	Email id:
	2016		India	info@gcpcgujarat.org.in
				<u>gcpc11@yahoo.com</u>
				Tele-Fax:
				079-23244147
Target Group	More than 20 par	ticipants from Mehsa	na	
Organizer	Gujarat Cleane	r Production Centre	;	
Institutions	-	<b>Cleaner Production</b>		
Involved	<ul> <li>Association</li> </ul>	on of Chemical Tec	hnologists	(India)
Objectives	-			aware industries about the
	importance of		•	tion and its applications for
		nental improvemen		
Description				mme was organized at,
of contents/				f Chemical Technologists (
agenda			-	of the concept of Cleaner
				d industrial personnel by ch 2016 at Mehsana.
		of the programme 15 members of ACI		Mr. Jignesh Vyas, president,
	The inaugural so Vyas, President,		welcome	speech from Shri. Jignesh
	difference betw small scale inc participation and cleaner/greene concept with m Gujarat Industric	veen End of Pipe Tr dustries. He reques nd utilize the Gov r processes. He als nethodology includi	eatment a sted the in ernment ir o gave glin ng Financio	the session mentioning the nd Proactive Treatment for ndustries to enhance the ncentive for installation of npse of cleaner production al Assistance Schemes from nmissionerate for successful
	questions rega	rding implementa ed on criteria of el ction in Industrial	tion of C igibility for	participants asked various leaner Production. Other the financial assistance for 015. These questions were

In concluding session, Dr. Bharat Jain, Member Secretary, GCPC gave vote of thanks to all the participants for giving their time for attending the programme.







Title:	Cleaner Produ	uction Promotion P	rogramme	at Veraval	
Events Details					
	Date	Place	Details	Contact Details	
	8 <sup>th</sup> March,	Hotel Lords Inn,	Gujarat,	Email id:	
	2016	Veraval	India	info@gcpcgujarat.org.in	
				<u>gcpc11@yahoo.com</u> Tele-Fax: 079-23244147	
Target Group	More than 50 Industrial Estate		udustries of F	ish Processing Cluster of Veraval	
Organizer	Gujarat Clea	ner Production Ce	ntre		
Institutions Involved	-	Gujarat Cleaner Production Centre			
Objectives	The overall objective of the programme is to aware industries about the importance of cleaner production and its applications for overall environmental improvement				
Description of contents/ agenda	The Cleaner Production Promotion Programme was organized at Hotel Lords Inn, Veraval to build wide spread understanding of the concept of Cleaner Production to various industrial sectors and industrial personnel by Gujarat Cleaner Production Centre on 8 <sup>th</sup> March 2016 at Hotel Lords Inn, Veraval. The participants of the programme included Mr. Kenny Thomas, Veraval Industrial Association, Mr. Piyush K Fokandi, Secretary, VIA, Mr. Ghadiya, Regional Officer, Junagadh, GPCB and more than 50 participants from				
	Veraval Fish F Mr. Kenny Th experience improving th practices, th	Processing Units we nomas, Veraval Ind during their stint ne estate through	re invited. dustrial Asso with Vera cleaner p air polluti	ociation shared his views and val Industries Association for production technologies and on and enhancing energy	
	presented the Government and proactive Gujarat Clea	ne industrialization of Gujarat to tack re way. Mr. Jain a ner Production Ce duction Concept	n in Gujaro de pollution lso discusse entre with it	ain, Member Secretary, GCPC at with the steps taken by a problem both in the reactive ed about the establishment of is result oriented activities with aportant tools and standard	

In Second presentation, Mr. P R Rathod, Project Engineer, GCPC explained the successful case study of Cleaner Production Implementation in Fish Processing Industries.

Final presentation was taken up by Mr. Hiren Bhendwal, Project Engineer, GCPC. He explained the Industrial Policy- 2009, financial assistance given by Industries Commissionerate, GoG for industries to encourage and prevent the pollution problem.

At the end of the programme, there was a question and answer session. Many participants raised issue regarding pollution problem and role of CP. Many of them agreed for CP Assessment in their industries.

Concluding session, Mr. Kenny Thomas, VIA offered a vote of thanks to Chief Guest, GCPC Team, Members of Veraval Industries Association, GPCB Officials and all participants.





## **Gujarat Cleaner Production Centre – Third Report on Cleaner Production Promotional Activities**







Title:	Cleaner Prod	uction Promotion Program	me at Rajk	ot
Events Details	Date	Place	Details	Contact Details
	11 <sup>th</sup> March, 2016	Ban Hall, Kutch Saurashtra Productivity Council, Rajkot	Gujarat, India	Email id: info@gcpcgujarat.org .in
				<u>gcpc11@yahoo.com</u> Tele-Fax: 079-23244147
Target Group	More than 50 p	participants from Industries of	f Rajkot Indu	strial Estate, Rajkot
Organizer	Gujarat Clea	ner Production Centre		
Institutions Involved	-			
Objectives	The overall objective of the programme is to aware industries about the importance of cleaner production and its applications for overal environmental improvement			
Description of contents/ agenda	Saurashtra understandin sectors and ir 11 <sup>th</sup> March 20 The participo Rajko, Aji, Bh Mr. Hasubha during their st through cle reducing air examples.	understanding of the concept of Cleaner Production to various industrial sectors and industrial personnel by Gujarat Cleaner Production Centre on 11 <sup>th</sup> March 2016 at Ban Hall, Kutch Saurashtra Productivity Council, Rajkot. The participants of the programme included several industrialists from Rajko, Aji, Bhaktinagar and Metoda GIDC Mr. Hasubhai Dave, President, KSPC shared his views and experience during their stint with Rajkot Industries Association for improving the estate through cleaner production technologies and practices, thereby reducing air pollution and enhancing energy efficiency, with small		
	discussed ab Government and proactiv with importan CP for each	oout the industrialization in of Gujarat to tackle pollu ve way. He explained th nt tools and standard me and every sector and its p oles of Waste minimization	n Gujarat v ution proble e concept ethodology potential as	with the steps taken by em both in the reactive of Cleaner Production and the importance of s well. He also discussed
	Dr. Bharat Ja	in also gave brief introdu	ction abou	t the incentive schemes

announced by the Industrial Department of GoG to encourage industrial units to implement Cleaner Production and take up measures to prevent pollution problem.

At the end of the technical session, question-answer session was conducted. In this session, industrialists were keen to know about industrial policy procedure and different scheme of the government of Gujarat. Industrialists from foundry also wanted to know about the Cleaner Production best practices for foundry process. Mr. Bharat Jain, Member Secretary, GCPC gave satisfactory answer to all the participants. They also explained policy and necessary documentation for the same.

The programme ended with vote of thanks.









Title:	Cleaner Productio	on Promotion Program	mme at Aı	nkleshwar
Events Details	Date	Place	Details	Contact Details
	14 <sup>h</sup> March, 2016	Ankleshwar Industries Association Hall, Ankleshwar	Gujarat , India	Email id: info@gcpcgujarat.or g.in gcpc11@yahoo.com Tele-Fax: 079-23244147
Target Group	Hall, Ankleshwar		es of Ankle	shwar Industries Associatior
Organizer		Production Centre		
Institutions Involved	Ankleshwc	eaner Production Ce Ir Industries Associati	on	
Objectives	-	cleaner production		ware industries about the applications for overal
Description of contents/ agenda	Ankleshwar Indus understanding of sectors and indu on 14 <sup>th</sup> March 201	tries Association Ha the concept of Cle strial personnel by ( 6 at Ankleshwar Inc	II, Ankleshv aner Produ Gujarat Cl dustries Ass	nme was organized a war to build wide spread uction to various industric eaner Production Centre ociation Hall, Ankleshwar s of Ankleshwar Industric
	presented the v production and Industrialization Government to proactive approx Tools and System Cleaner Producti clean Technolog Processing Indus industries during	isions of Cleaner F consumption. Mr. of Gujarat with t prevent pollution ach manner. Mr. Jain matic Methodology ion in industries. He gy Mainly used in the Implementa	Production Jain go the action problem k n also discu with Bes also gave Bleaching cussed his tion of t	ember Secretary, GCPC , as well as sustainable ive the introduction o n taken by the State ooth in a reactive and ussed Cleaner Production st Practices Example o e a brief introduction or g, Dyeing etc in Textile experience in Various he Cleaner Production ch resulted in water and
	the Industrial Pol	icy of Government	of Gujarat	he session and explained and SIDBI for promotion presentation consists o

Financial Assistance for MSMEs sector and Cluster of Industries for bundling projects.
 After that, in the question – answer session, participants asked various questions regarding implementation of Cleaner Production. Other questions focused on criteria of eligibility for the financial assistance for Cleaner Production in Industrial Policy – 2015. These questions were answered by Dr. Jain.
 In concluding session, Mr Dr. Bharat Jain, Member Secretary, gave vote of thanks to all the participants for giving their time for attending the programme.







Title:	Cleaner Productic Kathwada	on Promotion Program	mme at Ko	athwada Industrial Estate,	
Events					
Details	Date	Place	Details	Contact Details	
	14 <sup>h</sup> March, 2016	Ankleshwar	Gujarat	Email id:	
		Industries	,	info@gcpcgujarat.or	
		Association Hall,	India	<u>g.in</u>	
		Ankleshwar		gcpc11@yahoo.com	
				Tele-Fax:	
				079-23244147	
				0/ / 2024114/	
Target Group	More than 30 pa Kathwada	rticipants from Indus	tries of H	Kathwada Industrial Estate	
Organizer	Gujarat Cleaner	Production Centre			
Institutions		eaner Production C	entre		
Involved		ndustries Association			
Objectives				ware industries about the	
	importance of		r productio	on and its applications fo	
Deservicetter		ental improvement			
Description			-	nme was organized a	
of contents/		istrial Estate, Kat		o build wide spread Jction to various industric	
agenda	-	•			
agenaa		sectors and industrial personnel by Gujarat Cleaner Production Centre on 14 <sup>th</sup> March 2016 at Kathwada Industrial Estate, Kathwada.			
	Total 30 membe	rs Participation fror	n Industrie	s of Kathwada Industria	
	Estate, Kathwado	J.			
		1		tiated a presentation or	
				plained to all participant	
				reduction of waste at al	
			-	ustries of chemical sector	
				e economic growth and	
				. He also briefed on the	
	_			revention by giving the nd the world, such as the	
				Gas Tragedy of 1984. He	
		•		will not only be sufficien	
				iment, there is an urgen	
	•	n prevention' strateg		•	
	He also mentione	ed about the Clear	ner Produc	tion tools, methodologie	
				inception of GCPC and	
	-	-		monstrate and promote	
	Cleaner Produc	ction, GCPC's a	ctivities,	and achievements a	

international, national and local level.
After that, Mr. Sumit Patel, Assistant Project Engineer, GCPC made a presentation on case studies of successful implementation of Cleaner Production in some industries of dyes and intermediates, chemicals and pharmaceutical industries. He made a comparison between raw material consumption, energy consumption and water consumption before implementation of CP and after implementation of CP. He also discussed various best available techniques to improve processes and best use of resources.
After that, Mr. P. R. Rathod again made a presentation on the schemes of financial assistance available under the Gujarat Industrial Policy – 2015 of Industries Commissionerate, Government of Gujarat for implementing Cleaner Production in industries. He explained all the schemes in details and promoted the participants to utilize the scheme by implementing Cleaner Production in their units. With that, he also explained about Cleaner Production Award of Government of Gujarat, being awarded annually to the industries that successfully implement Cleaner Production and reduce emissions to air, water and land and preserve resources in both small & medium scale and large scale industries.
After that, in the question – answer session, participants asked various questions regarding implementation of Cleaner Production. Other questions focused on criteria of eligibility for the financial assistance for Cleaner Production in Industrial Policy – 2015. These questions were answered by Mr. P. R. Rathod, Senior Project Engineer, GCPC.
In concluding session, Dr. Bharat Jain, Member Secretary, GCPC, gave vote of thanks to all the participants for giving their time for attending the programme.



**Gujarat Cleaner Production Centre – Third Report on Cleaner Production Promotional Activities** 







Title:	Cleaner Productio Ahmedabad.	n Promotion Program	nme at Ho	tel four Point Shareton,
Events Details	Date	Place	Details	Contact Details
	19 <sup>h</sup> March, 2016	Hotel four Point Shareton, Ahmedabad.	Gujarat , India	Email id: info@gcpcgujarat.or g.in
				gcpc11@yahoo.com Tele-Fax: 079-23244147
Target Group	More than 30 part Ahmedabad.	icipants from Industri	es of Hot	el four Point Shareton
Organizer		Production Centre		
Institutions Involved		eaner Production Ce F&CC, Gol	entre	
Objectives	ENVIS, MoEF&CC, Gol The overall objective of the programme is to aware industries about the importance of cleaner production and its applications for overall environmental improvement			
of contents/ agenda	The Cleaner Production Promotion Programme was organized at Hote four Point Shareton, Ahmedabad to build wide spread understanding of the concept of Cleaner Production to various industrial sectors and industrial personnel by Gujarat Cleaner Production Centre on 19 <sup>th</sup> March 2016 at Hotel four Point Shareton, Ahmedabad Shri R. Parthsarthy IAS (Retired), Additional Chief Secretary, Forests & Environment Department, GoG was invited as a Chief Guest of the seminar, while Shri Shankarbhai R Patel, immediate passed President Gujarat Chamber of Commerce and Industry & Chairman, The Greek Environment Services Co-Op, Soc. Ltd and Shri Jignesh A. Vyas, President , ACTI, were invited as special guests. On special request, Shri Jatin Pate President, Naroda Industries Association was also present.			
	Chemical Techno St.Xaviers Collage School of Scienc	ologists, India, Profe e, M.G Science Co	essors and ollege, Bho e of Desig	nbers of Association o Research Scholars from awan's Science College n, R.C.Technical Institute eminar.
	presented the in Government of G	ndustrialization in ( Gujarat to tackle po	Gujarat w Ilution prob	Nember Secretary, GCPC ith the steps taken by plem both in the reactive pout the establishment o
			-	-

Gujarat Cleaner Production Centre with its result oriented activities with Cleaner Production Concept and its important tools and standard methodology.

After that, Mr. P. R. Rathod again made a presentation on the schemes of financial assistance available under the Gujarat Industrial Policy – 2015 of Industries Commissionerate, Government of Gujarat for implementing Cleaner Production in industries. He explained all the schemes in details and promoted the participants to utilize the scheme by implementing Cleaner Production in their units. With that, he also explained about Cleaner Production Award of Government of Gujarat, being awarded annually to the industries that successfully implement Cleaner Production and reduce emissions to air, water and land and preserve resources in both small & medium scale and large scale industries.

After that, in the question – answer session, participants asked various questions regarding implementation of Cleaner Production. Other questions focused on criteria of eligibility for the financial assistance for Cleaner Production in Industrial Policy – 2015. These questions were answered by Mr. P. R. Rathod, Senior Project Engineer, GCPC.

In concluding session, Shri R. Parthsarthy IAS (Retired), Additional Chief Secretary, Forests & Environment Department, GoG gave vote of thanks to all the participants for giving their time for attending the programme.







Title:	Cleaner Productic Narol	on Promotion Progra	mme at No	arol Industrial Estate,
Events Details	Date	Place	Details	Contact Details
	21 <sup>st</sup> March, 2016	Narol Industrial Estate, Narol	Gujarat , India	Email id: <u>info@gcpcgujarat.or</u> <u>g.in</u> <u>gcpc11@yahoo.com</u> Tele-Fax: 079-23244147
Target Group	More than 15 pa Kathwada	rticipants from Indus	tries of k	Kathwada Industrial Estate
Organizer	Gujarat Cleaner I	Production Centre		
Institutions Involved	The Ahmee	eaner Production C dabad Textile Proce	essors Assoc	
Objectives	The overall objective of the programme is to aware industries about the importance of cleaner production and its applications for overall environmental improvement			
Description of contents/ agenda	Industrial Estate, Narol <b>to</b> build wide spread understanding o concept of Cleaner Production to various industrial sectors and industria			d understanding of the trial sectors and industria
	Narol Industrial Estate, Narol. Total 30 members Participation from Industries of Narol Industrial Es Narol. Dr. Bharat Jain, Member Secretary, GCPC initiated a presentatio Cleaner Production. In his presentation, he explained to all particip the importance of resource conservation and reduction of waster the process stages, particularly in polluting industries of chemical se He also explained the concept of sustainable economic growth asked all industries to practice it in their units. He also briefed or emergence of the concept of pollution prevention by giving examples of some historical disasters in India and the world, such a Great London Smog of 1952 and the Bhopal Gas Tragedy of 1984 said that the 'pollution treatment' (End of pipe) will not only be suffic for answering to the poor condition of environment, there is an ur need of 'pollution prevention' strategy (Cleaner Production).		tiated a presentation on plained to all participants reduction of waste at al ustries of chemical sector. e economic growth and . He also briefed on the revention by giving the nd the world, such as the Gas Tragedy of 1984. He will not only be sufficient ament, there is an urgent	
	of implementatic its role in industr	on, barriers to imple	mentation, ement, de	tion tools, methodologies inception of GCPC and monstrate and promote and achievements a

international, national and local level.
After that, Mr. P. R. Rathod made a presentation on case studies of successful implementation of Cleaner Production in some industries of dyes and intermediates, chemicals and pharmaceutical industries. He made a comparison between raw material consumption, energy consumption and water consumption before implementation of CP and after implementation of CP. He also discussed various best available techniques to improve processes and best use of resources.
Mr. P. R. Rathod again made a presentation on the schemes of financial assistance available under the Gujarat Industrial Policy – 2015 of Industries Commissionerate, Government of Gujarat for implementing Cleaner Production in industries. He explained all the schemes in details and promoted the participants to utilize the scheme by implementing Cleaner Production in their units. With that, he also explained about Cleaner Production Award of Government of Gujarat, being awarded annually to the industries that successfully implement Cleaner Production and reduce emissions to air, water and land and preserve resources in both small & medium scale and large scale industries.
After that, in the question – answer session, participants asked various questions regarding implementation of Cleaner Production. Other questions focused on criteria of eligibility for the financial assistance for Cleaner Production in Industrial Policy – 2015. These questions were answered by Mr. P. R. Rathod, Senior Project Engineer, GCPC.
In concluding session, Dr. Bharat Jain, Member Secretary, GCPC, gave vote of thanks to all the participants for giving their time for attending the programme.











## **Gujarat Cleaner Production Centre**

Established by Industries & Mines Department (Government of Gujarat)

