सत्यमेव जयते

ANNUAL REPORT
2018-19

Government of India
Ministry of Chemicals & Fertilizers
Department of Chemicals and Petrochemicals

CONTENTS

ANNEXURES

Chapter - 1

INTRODUCTION

1.1 Department of Chemicals and Petrochemicals (DCPC) aims:

i. To formulate and implement policy and programmes for achieving growth and development of chemical and petrochemical sectors in the country; and
ii. To foster the spirit of public-private partnership for overall development of above-mentioned sectors of the industry.

1.2 The Department has the mandate to deal with the following broad subject matters:

i. Insecticides (excluding the administration of The Insecticides Act, 1968 (46 of 1968);
ii. Dye-stuffs and Dye-Intermediates;
iii. All organic and inorganic chemicals, not specifically allotted to any other Ministry or Department;
iv. Planning, development and control of, and assistance to, all industries dealt with by the Department;
v. Bhopal Gas Leak Disaster-Special Laws relating thereto;
vi. Petrochemicals;
vii. Industries relating to production of non-cellulosic synthetic fibers (Nylon Polyesters, Acrylic etc.);
viii. Synthetic Rubber; and
ix. Plastics including fabrications of plastic and moulded goods.

1.3 The Department has five major divisions viz. Chemicals, Petrochemicals, Administration, Statistics & Monitoring (S&M) and Economic Division. The Integrated Finance Division is common to the three Departments in the Ministry of Chemicals and Fertilizers.

1.4 There are three Central Public Sector Undertakings (CPSUs) in the chemical sector, namely, Hindustan Organic Chemicals Ltd. (HOCL), HIL (India) Limited and Hindustan Fluorocarbons Limited (HFL), which is a subsidiary of HOCL and one CPSU in the petrochemical sector viz. Brahmaputra Cracker and Polymer

Ltd. (BCPL). The autonomous institutes under this Department are Central Institute of Plastics Engineering & Technology (CIPET) and Institute of Pesticides Formulation Technology (IPFT).

1.5 Late Shri Ananth Kumar was the Minister of Chemicals and Fertilizers upto 12.11.2018. Shri D.V. Sadananda Gowda assumed the charge of Minister for Chemicals and Fertilizers with effect from 13.11.2018. Shri Mansukh Mandaviya and Shri Rao Inderjit Singh are Ministers of State for Chemicals and Fertilizers. Shri P. Raghavendra Rao is the Secretary of the Department.

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Chapter - 2

AN OVERVIEW OF CHEMICAL AND PETROCHEMICAL INDUSTRY

Chemical and Petrochemical Industry

2.1 The chemical industry is a knowledge intensive as well as capital intensive industry. It is an integral constituent of the growing Indian Industry. It includes basic chemicals and its products, petrochemicals, fertilizers, paints, varnishes, gases, soaps, perfumes and toiletry and pharmaceuticals. The diversification within the chemical industry is large and covers more than eighty thousand commercial products. This Industry occupies a pivotal position in meeting basic needs and improving quality of life. The industry is the main stay of industrial and agricultural development of the country and provides building blocks for several downstream industries, such as textiles, papers, paints, varnishes, soaps, detergents, pharmaceuticals, etc.

2.2 As per National Industrial Classification (NIC) 2008, Chemical & Chemical products are covered under the industry division 20. The description of product groups at 4-digit level under this division is given below:

Table I: Description of Product Groups

Class	Description
2011	Manufacture of basic chemicals
2012	Manufacture of fertilizers and nitrogen compounds
2013	Manufacture of plastics and synthetic rubber in primary forms
2021	Manufacture of pesticides and other agrochemical products
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
2029	Manufacture of other chemical products n.e.c.
2030	Manufacture of man-made fibres

(*The industry division 24 of NIC 2004 is equivalent of industry division 20 (manufacture of chemical & chemical products), 21(manufacture of pharmaceuticals, medicinal chemicals and botanical products) and 268 (manufacture of magnetic and optical media) of NIC 2008.)*

2.3 According to National Accounts Statistics 2018, brought out by the Central Statistics Office (CSO), chemical and chemical products sector (industry division 20 of NIC 2008) accounted for 1.41% of the GVA for all economic activities (at

2011-12 prices) in 2016-17, compared to 1.49% in 2015-16. The share of this sector in the GVA of manufacturing sector at 2011-12 prices was 7.76% during 2016-17 as compared to 8.24% in 2015-16. Share of Chemical and chemical products sector including pharmaceutical sector (industry division 20 and 21 of NIC 2008) accounted for 2.66% of the GVA for all economic activities (at 2011-12 prices) in 2016-17, compared to 2.68% in 2015-16. The share of this sector in the GVA of manufacturing sector at 2011-12 prices was 14.58% during 2016-17 as compared to 14.83% in 2015-16.The CAGR based on average annual index of Industrial Production (IIP) for the Chemicals and Chemicals product (Industry Division 20: NIC 2008) during the period 2014-15 to 2018-19 is 2.13%. The size of the Indian Chemical industry (industry division 20 of NIC 2008) in terms of value of output in the year 2016-17 was Rs. 6,83,538 crore while size of the Indian Chemical industry including Pharmaceutical (industry division 20 and 21 of NIC 2008) in terms of value of output in the year 2016-17 was Rs. 10,81,265 crore.

2.4 The production of selected Major Chemicals and Petrochemicals during the years 2014-15 to 2018-19 is given in Table-II. The production of Total Major Chemicals and Petrochemicals in 2018-19 was 27,847 thousand MT, compared to 26,738 thousand MT in 2017-18 implying growth of 4.15%. CAGR in production of Total Chemicals and Petrochemicals during the period 2014-15 to 2018-19 is 4.77%.

Table II: Production of selected major chemicals and petrochemicals

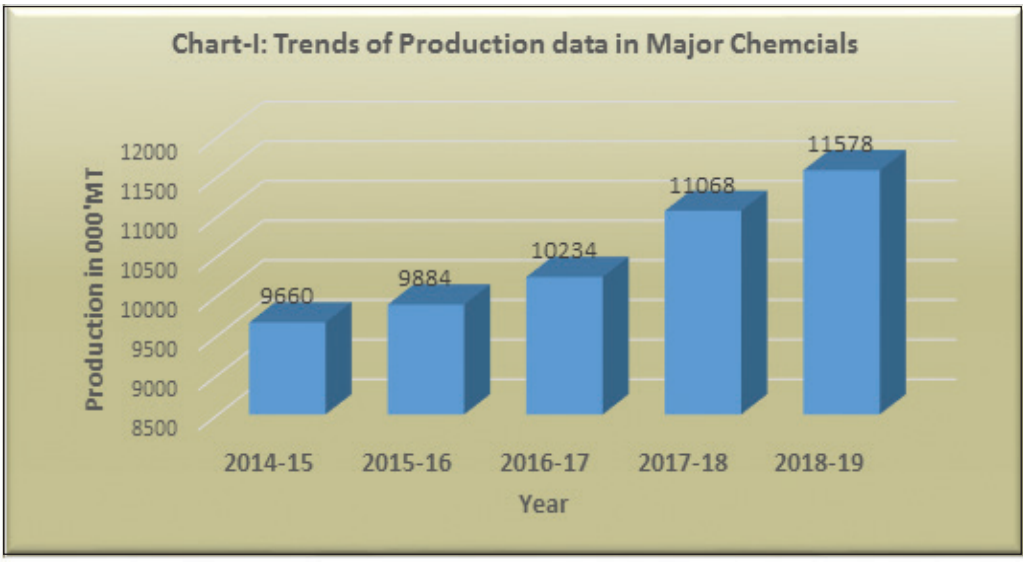
Group	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR (%)
Alkali Chemicals	6625	6802	7009	7631	8043	4.97
Inorganic Chemicals	944	1002	1053	1058	1064	3.04
Organic Chemicals	1619	1589	1638	1799	1884	3.86
Pesticides	186	188	214	213	217	3.93
Dyes & Pigments	285	304	320	367	370	6.74
Total Basic Major Chemicals	9660	9884	10234	11068	11578	4.63
Synthetic Fibres	3532	3558	3599	3625	3601	0.48
Polymers	7558	8839	9163	9276	10040	7.36
Elastomers (S. Rubber)	172	242	285	308	351	19.52
Synth. Detergent Intermediates	596	566	664	743	687	3.62
Performance Plastics	1591	1700	1799	1719	1589	-0.03
Total Basic Major Petrochemicals	13448	14905	15510	15670	16269	4.88

Total Basic Major Chemicals & Petrochemicals	**23108**	**24789**	**25744**	**26738**	**27847**	**4.77**

Note: The total basic Chemicals and Petrochemicals production is aggregated based on monthly production returns from manufacturers under large and medium scale. Product- wise and Group wise details of installed capacity and production for major chemicals and major petrochemicals are given in Annexure-I & Annexure-II respectively.

Chemical Sector- Production Trends

2.5 It may be seen from Table II that the production of Alkali Chemicals accounts for around 69% of the total production of Major Chemicals for the year 2018-19. The production of Major Chemicals in 2018-19 is 11,578 thousand MT, compared to 11,068 thousand MT during the same period in 2017-18 implying a growth of 4.61%. The CAGR in production of total basic major Chemicals during the period 2014-15 to 2018-19 is 4.63%. The trend in the production of selected major chemicals is depicted in Chart I.

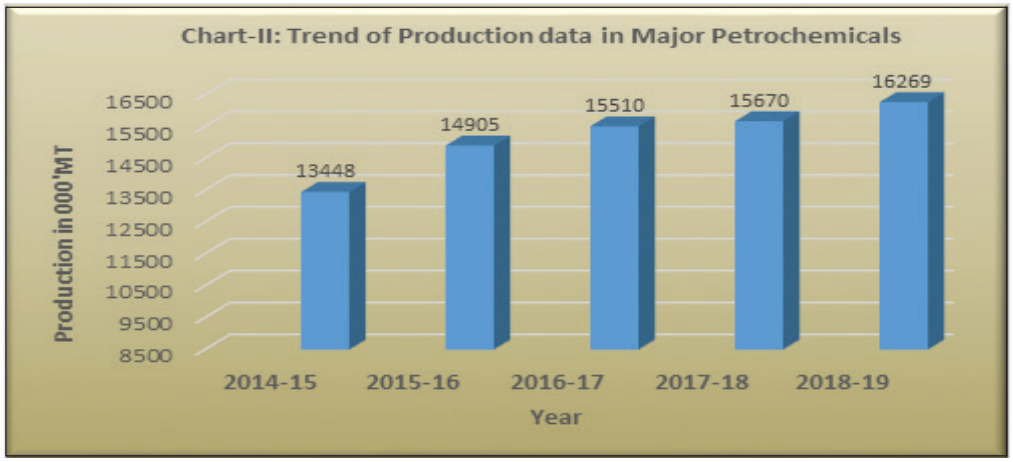


Petrochemical Sector- Production Trends

2.6 Petrochemicals, which comprise of plastic and host of other chemicals, are downstream hydrocarbons derived from crude oil and natural gas. The value additions in the petrochemicals chain offer immense possibilities and cater to the need of textiles and clothing, agriculture, packaging, infrastructure, healthcare, furniture, automobiles, information technology, power, electronics and telecommunication, irrigation, drinking water, construction and a host of other articles of daily and specialized usage amidst other emerging areas.

2.7 There are two naphtha, two gas based and seven dual feed cracker complexes in the country with a combined annual ethylene capacity of 7.2 million MT.

2.8 From Table II, it may be seen that the production of polymers account for around 61% of the total production of Basic Major Petrochemicals for the year 2018-19. The production of Basic Major Petrochemicals in 2018-19 is 16,269 thousand MT, compared to 15,670 thousand MT in 2017-18 implying growth of 3.82%. The CAGR in production of major petrochemicals during the period 2014-15 to 2018-19 is 4.88%. The trend in the production of selected major petrochemicals has been depicted in Chart II.



Index of Industrial Production

2.9 The weight of chemical and chemical products (Industry Division 20 of NIC 2008) is 7.87 out of 100 in the Index of Industrial Production (Base Year: 2011-12). The General Index for the month of March 2019 stands at 140.20, which is 0.07% lower as compared to the level in the month of March 2018. The cumulative growth of general index for the period April-March 2018-19 over the corresponding period of the previous year 2017-18 stands at 3.57%. The Index of Industrial Production for the manufacturing sector for the month of March 2019 stands at 139.60, which is 0.43% lower as compared to the level in the month of March 2018, whereas the Index of Industrial Production for the Chemicals and Chemical products for the month of March 2019 stands at 128.40 which is 1.18% higher as compared to the level in the month of March 2018. The cumulative growth in manufacturing sector during April-March 2018-19 over the corresponding period of 2017-18 has been 3.48% while cumulative growth in Chemical & Chemical products during April-March 2018-19 over the corresponding period of 2017-18 has been 2.38%. The month-wise Index of Industrial production during 2017-18 and 2018-19 is depicted in Table III.

Table III: Index of Industrial Production

(Base : 2011-12=100)

Period	Chemicals and chemical products	Manufacturing	General
Weight	7.87	77.63	100.00
Apr-17	108.60	117.30	117.30
May-17	113.60	125.60	124.80
Jun-17	110.20	120.30	119.30
Jul-17	111.70	119.30	118.00
Aug-17	117.10	124.10	122.10
Sep-17	118.50	125.60	123.10
Oct-17	116.90	123.70	122.50
Nov-17	119.10	127.70	125.80
Dec-17	119.00	132.00	130.60
Jan-18	120.10	133.80	132.30
Feb-18	110.90	129.70	127.40
Mar-18	126.90	140.20	140.30
Apr-18	112.90	123.10	122.60
May-18	119.90	130.10	129.60
Jun-18	116.50	128.60	127.70
Jul-18	116.40	127.60	125.70
Aug-18	126.00	130.60	128.00
Sep-18	120.30	131.60	128.80
Oct-18	118.0	133.9	132.8
Nov-18	110.90	126.80	126.10
Dec-18	122.40	135.80	133.90
Jan-19	122.60	135.20	134.20
Feb-19	111.50	129.20	127.50
Mar-19	128.40	139.60	140.20

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation

2.10 The behaviour of IIP of chemicals and chemical products vis-à-vis General IIP and IIP of manufacturing from 2013-14 to 2018-19 is depicted in Table IV and Chart III. The Average annual growth rate during the period 2014-15 to 2018-19 in Chemicals and Chemicals Products based on IIP is 2.13% while it is 3.83% for manufacturing sector.

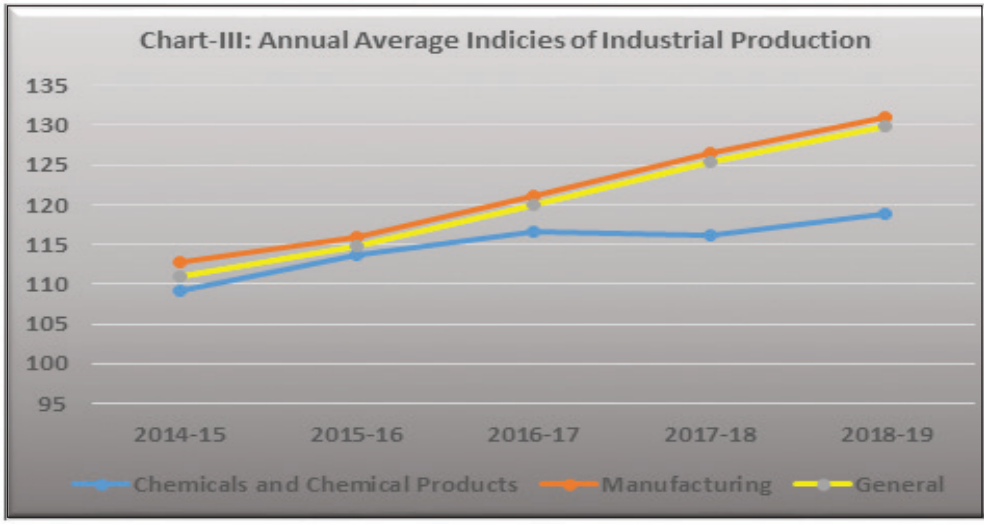
Table IV: Annual Average (April-March) Indices of Industrial Production

(Base: 2011-12 =100)

Particulars	Weight	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Chemicals and Chemical Products	**7.87**	109.2	113.7	116.5	116.1	118.8	2.13
Manufacturing	**77.63**	112.7	115.9	121	126.6	131	3.83
General	**100.00**	111.0	114.7	120	125.3	129.8	3.99

Source: website of Ministry of Statistics and Programme Implementation.

Whole Sale Price Index (WPI)



2.11 The annual rate of inflation based on monthly WPI (Base Year: 2011-12) released by the Office of the Economic Advisor, for 'all commodities' stood at 3.18% for the month of March 2019 over March 2018. The index for 'Food Articles' group increased by 5.68%, rose for 'Manufactured Products' by 2.16% and rose for 'Chemicals & Chemical products' by 3.64% during the same period. The weight of Chemicals & Chemical products in the WPI is 6.47 out of all commodities weight of 100. The month-wise Index of WPI from April 2017 to March 2019 is given in Table V.

Table V: Whole Sale Price Index

(Base Year: 2011-12 =100)

Month	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Apr-17	113.2	138.6	112.6	111.6
May-17	112.9	137.9	112.6	111.7
Jun-17	112.7	139.2	112.6	111.5
Jul-17	113.9	147.9	112.6	111.1
Aug-17	114.8	150.9	112.8	111.1
Sep-17	114.9	144.8	113.7	111.3
Oct-17	115.6	148.0	113.7	111.9
Nov-17	116.4	151.1	114.0	112.4
Dec-17	115.7	144.1	114.2	113.2
Jan-18	116.0	140.8	114.9	114.1
Feb-18	116.1	137.9	115.5	115.1
Mar-18	116.3	137.3	115.8	115.5
Apr-18	117.3	139.8	116.3	116.3
May-18	118.3	140.3	116.9	117.4
Jun-18	119.1	141.8	117.3	117.6
Jul-18	119.9	144.8	117.7	118.3
Aug-18	120.1	144.8	117.8	118.8
Sep-18	120.9	144.5	118.4	119.6
Oct-18	122.0	145.9	118.9	120.5
Nov-18	121.6	146.2	118.8	121.2
Dec-18	119.7	143.5	118.3	120.0
Jan-19	119.2	144.2	118.1	119.6
Feb-19	119.5	143.7	118.2	119.7
Mar-19	120.0	145.1	118.3	119.7

Source :Office of the Economic Advisor (http://eaindustry.nic.in)

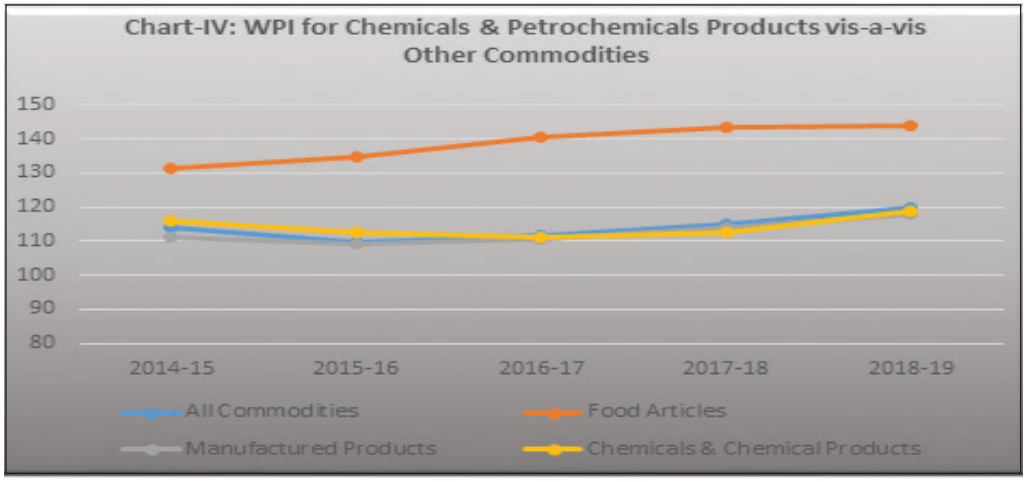
2.12 Table VI and Chart IV below show the annual WPI for chemicals & chemical products vis-à-vis all commodities, food articles and manufactured products during the years 2014-15 to 2018-19. The Average annual growth rate during the period 2014-15 to 2018-19 in Chemicals and Chemicals Products based on WPI is 0.63% while it is 1.48% for manufactured products.

Table VI: Annual Average (April - March) Indices of Wholesale Price

(Base Year: 2011-12 = 100)

Description	Weight	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR (%)
All Commodities	100.00	113.90	109.70	111.60	114.90	119.80	1.27
Food Articles	15.26	131.50	134.90	140.30	143.20	143.72	2.25
Manufactured Products	64.23	111.20	109.20	110.70	113.80	117.92	1.48
Chemicals & Chemical Products	6.47	116.10	112.60	111.00	112.50	119.06	0.63

Source :Office of the Economic Advisor (http://eaindustry.nic.in)



2.13 Table VII shows WPI of different commodity groups within Chemicals & Chemical products group during the years 2013-14 to 2017-18.

Table VII: WPI of Chemicals & Chemical Products

(Base year: 2011-12=100)

DESCRIPTION	WEIGHT	2013-14	2014-15	2015-16	2016-17	2017-18
Chemicals and Chemical Products	6.47	113.30	116.10	112.60	111.00	112.50
Basic Chemicals	1.43	112.10	114.10	105.80	104.70	111.20

Fertilizers and Nitrogen Compounds	1.48	116.50	118.90	121.40	118.70	117.10
plastic and synthetic rubber in primary form	1.00	118.50	124.40	115.30	113.70	113.00
Pesticides and Other Agrochemical Products	0.45	111.10	120.70	122.60	116.80	115.30
paints, Varnishes and Similar Coatings, Printing Ink and Mastics	0.49	109.70	111.90	109.80	108.50	108.60
Soap and Detergents, Cleaning and Polishing Preparations, Perfumes and Toilet Preparations	0.61	111.50	112.40	112.30	113.70	115.20
Other Chemical Products	0.69	110.70	111.80	108.40	106.50	110.10
Man-Made Fibres	0.30	105.60	100.90	93.30	94.10	97.50

Source :Office of the Economic Advisor (http://eaindustry.nic.in)

INTERNATIONAL TRADE

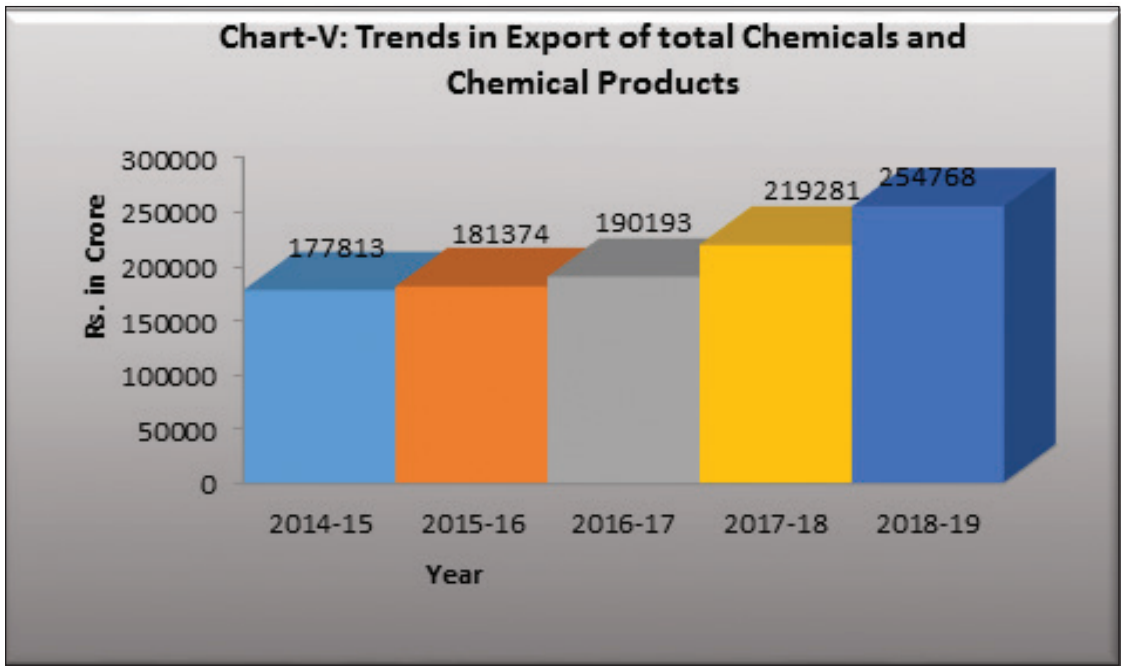
2.14 Trends in exports and imports of Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers) during 2014-15 to 2018-19 are given in Table VIII and Chart V and Chart VI.

Table VIII: Exports and Imports– Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)

A. Exports (In Rs. crore)

HS Code	Commodity	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR (%)
	Total National Exports	1896445	1716384	1849434	1956515	2076262	2.29
28	INORGANIC CHEMICALS	8749	7913	9138	11175	12599	9.55
29	ORGANIC CHEMICALS	73069	75295	78386	95381	114027	11.77
32	TANNING OR DYEING	17206	16165	17189	18951	20825	4.89

38	MISCELLANEOUS CHEMICAL PRODUCTS.	19432	20083	21792	25080	28948	10.48
39	PLASTIC AND ARTICLES THEREOF.	31022	34381	35502	40928	51159	13.32
4002	SYNTHETIC RUBBER AND FACTICE	379	452	480	571	686	15.95
54	MAN-MADE FILAMENTS.	14621	13460	13334	13984	14506	-0.20
55	MAN-MADE STAPLE FIBRES.	13334	13625	14373	13212	12018	-2.57
A:Total Chemicals and Petrochemical Products		**177813**	**181374**	**190193**	**219281**	**254768**	**9.41**
	% share in total export	9.4	10.6	10.3	11.2	12.3	



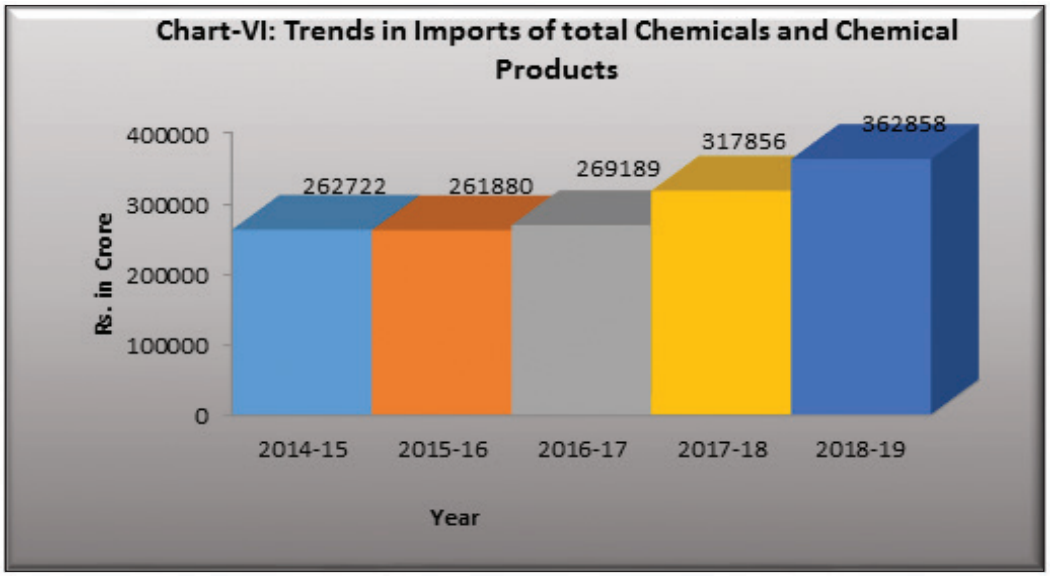
B. Imports

(Rs. in crore)

HS Code	Commodity	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR (%)
	Total National Imports of which	2737087	2490306	2577675	3001033	3285767	4.67
28	INORGANIC CHEMICALS	31413	33170	31654	38927	48911	11.71
29	ORGANIC CHEMICALS	108320	101986	103798	123761	144474	7.47

32	TANNING OR DYEING	9821	10467	11186	12995	14103	9.47
38	MISCELLANEOUS CHEMICAL PRODUCTS.	25494	27207	30642	35521	38257	10.68
39	PLASTIC AND ARTICLES THEREOF.	71398	74566	77573	89768	97489	8.10
4002	SYNTHETIC RUBBER AND FACTICE	6697	5205	5654	6687	7316	2.24
54	MAN-MADE FILAMENTS.	5042	4879	4856	5538	6270	5.60
55	MAN-MADE STAPLE FIBRES.	4539	4401	3826	4658	6038	7.40
B: Total Chemicals and Petrochemical Products		**262722**	**261880**	**269189**	**317856**	**362858**	**8.41**
	% share in total import	9.6	10.5	10.4	10.6	11.0	

(Source: DGCIS website)



2.15 As per import figures for the year 2018-19, the Import of Chemicals and Petrochemical products (excluding Pharmaceutical Products and Fertilizers) contributed 11% of total imports in 2018-19 which was 10.6% in the year 2017-18 whereas the Export contributed 12.3% of total Export in the year 2018-19 compared to 11.2% in the year 2017-18. CAGR in export of Total Chemicals and Chemicals products (excluding Pharmaceutical & fertilizer products) during the period 2014-15 to 2018-19 is 9.41% while CAGR of total national export is 2.29%. CAGR in import of total Chemicals and Chemicals products (excluding Pharmaceutical & fertilizer products) during the period 2014-15 to 2018-19 is 8.41% while CAGR of total national import is 4.67%.

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Chapter – 3

SCHEMES OF THE DEPARTMENT

3.1 The Department of Chemicals and Petrochemicals is implementing three Central Sector Schemes viz Assam Gas Cracker Project (AGCP), New Schemes of Petrochemicals (Plastic Parks Scheme & Scheme of Centres of Excellence) and Chemical Promotion & Development Schemes (CPDS). In addition, the Department is also implementing other schemes for funding its Secretariat expenses; support to Central Institute of Plastic Engineering & Technology (CIPET), which is engaged in academic, technology support, research and skill development activities; Institute of Pesticides Formulation Technology (IPFT) and Bhopal Gas Leak Disaster (BGLD).

3.2 The Assam Gas Cracker Project (AGCP) has been implemented by M/s Brahmaputra Cracker and Polymer Limited (BCPL) to produce about 2.8 lakh MT of polymers per annum. The last revised cost of the project approved by the Hon'ble Minister (C&F) in July, 2016, is Rs.9965 crore comprising capital subsidy of Rs. 5,239.45 crore, debt of Rs. 3,307.88 crore and equity of Rs. 1,417.67 crore. Out of the total capital subsidy of Rs.5,239.45 crore, Rs.4,990.00 crore has been released till March, 2019. The Plant/ Project has been commissioned on 2nd January, 2016 and dedicated to the nation on 05.02.2016 by Hon'ble Prime Minister.

3.3 The Department has been closely monitoring the Plant operations. A co-ordination Committee of stake-holders was constituted on the recommendation of Standing Committee on Chemicals and Fertilizers to resolve any operational issues faced by BCPL which has held two meetings so far.

3.4 To make the project economically viable, BCPL has proposed many steps including feedstock subsidy.

3.5 In view of time overruns, foreign exchange fluctuations, price escalation, increase in statutory levies etc. further cost and time escalations occurred and therefore, BCPL proposed revised project cost of Rs. 9965 crore . The increase in project cost of Rs. 1045 crore was proposed to be funded by capital subsidy of Rs. 549.45 crore, equity of Rs. 148.67 crore and debt of Rs. 346.88 crore. The

Ministry of Finance allocated Rs. 100 crore under BE 2017-18 and Rs. 200 crore under BE 2018-19 for AGCP out of the requirement of RS. 549.45 crore and it has been approached for allocation of the balance Rs. 249.45 crore.

3.6 The larger objective of the Plastic Parks scheme is to contribute to the economy by increasing investment, production, exports in the Petrochemicals sector alongwith generation of employment.

3.7 Schemes of Centres of Excellence provides Grant-in-aid to identified research institute(s), with the aim of improving the existing petrochemicals technology and research in the country and to promote development of new applications of polymers and plastics.

3.8 Under the Chemicals Promotion Development Scheme (CPDS), the Department provides Grant-in-aid to various organizations/industry associations, etc. to organise workshops, seminars and for conducting studies/ surveys for the creation and dissemination of knowledge for the development of chemical and petrochemical sectors.

3.9 The Department provides budgetary support to CIPET for strengthening its civil and technical infrastructure, research and development capacities and academic and training initiatives and also for construction of hostels and setting up new CIPET centres.

3.10 IPFT, located at Gurugram is an autonomous body under the Department of Chemicals and Petrochemicals with mandate to develop environment and user friendly pesticides formulation technologies for a safer environment and also develop methods for the detection and analysis of pesticides and their residues.

3.11 Office of the Welfare Commissioner of Bhopal is entrusted with the work of disbursement of compensation to Bhopal Gas victims. Budget is provided settlement of ex-gratia cases.

3.12 Expenditure under Secretariat head is of contingent nature for payment of salaries and office expenses etc. of the Department.

Table No. IX: Scheme-wise Outlay

(Rs. in crore)

Sr. No.	Schemes	Original BE 2018-19	BE 2018-19 (after First Supplem-entary)	RE 2018-19**	BE 2019-20
I	**Central Sector Schemes**				
1.	Assam Gas Cracker Project (AGCP)	0.01	200.01	200.00	100.00
2.	New Schemes of Petrochemicals	55.50	55.50	19.00	31.65
3.	Chemical Promotion & Development Schemes (CPDS)	3.00@	3.00@	2.50	3.00
	Total of I	**58.51**	**258.51**	**221.50**	**134.65**
II	**Other Central Expenditure (Sectt/ BGLD/ABs/PSUs)**				
1.	Secretariat	21.68	21.68	18.69	19.58
2.	Central Institute Of Plastic Engineering &Technology(CIPET)	83.64	83.64	72.00	80.00
3.	Institute of Pesticides Formulation Technology(IPFT)	7.50	7.50	7.50	8.00
4.	Bhopal Gas Leak Disaster (BGLD)	28.32	28.32	21.30	21.42
	Total of II	**141.14**	**141.14**	**119.49**	**129.00**
	Grand Total (I+II)	**199.65**	**399.65**	**340.99**	**263.65**

@ This includes provision of Rs. 90.00 lakhs for the National Awards Scheme.

*** As indicated by D/o Expenditure.*

Table X: Expenditure 2017-18 & 2018-19

(Rs. in crore)

Sr. No.	Name of Scheme	BE 2017-18	RE 2017-18	Exp. 2017-18	% of Exp. w.r.t. RE 2017-18	BE 2018-19 (after First supple-mentary 2018-19)	RE 2018-19	Exp as on 31.3.2019	% of Exp. w.r.t. RE 2018-19
I	**Central Sector Schemes**								
1.	Assam Gas Cracker Project (AGCP)	100.01	100.01	100.00	99.99	200.01	200.00	200.00	100.00

2.	New Schemes of Petrochemicals	48.00	26.51	10.80	40.74	55.50	19.00	19.00	100.00
3.	Chemical Promotion & Development Schemes (CPDS)	1.99	* 2.00	1.35	67.50	3.00@	2.50	2.39	95.60
	Total of I	**150.00**	**128.52**	**112.15**	**87.26**	**258.51**	**221.50**	**221.39**	**99.95**
II	**Other Central Expenditure (Sectt/ BGLD/ ABs/PSUs)**								
1.	Secretariat	20.41	20.00	17.71	88.55	21.68	18.69	18.10	96.84
2.	Central Institute Of Plastic Engineering &Technology (CIPET)	68.08	68.08	68.08	100.00	83.64	72.00	72.00	100.00
3.	Institute of Pesticides Formulation Technology(IPFT)	9.16	7.50	7.10	94.67	7.50	7.50	7.50	100.00
4.	Hindustan Organic Chemicals Ltd. (HOCL)	24.61	384.87	384.75	99.97	0.00	0.00	0.00	0.00
5.	Bhopal Gas Leak Disaster (BGLD)	25.74	25.74	22.32	86.71	28.32	21.30	20.98	98.50
	Total of II	**148.00**	**506.19**	**499.96**	**98.77**	**141.14**	**119.49**	**118.58**	**99.24**
	Grand Total (I+II)	**298.00**	**634.71**	**612.11**	**96.44**	**399.65**	**340.99**	**339.97**	**99.70**

** This includes provision of Rs. 80.00 lakhs for the National Awards Scheme.*
@ This includes provision of Rs. 90.00 lakhs for the National Awards Scheme.

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Chapter – 4

PETROLEUM, CHEMICAL AND PETROCHEMICAL INVESTMENT REGIONS (PCPIRs)

Background

4.1 Four Petroleum, Chemical and Petrochemical Investment Regions (PCPIRs) are being implemented in the States of Andhra Pradesh (Vishakhapatnam), Gujarat (Dahej), Odisha (Paradeep) and Tamil Nadu (Cuddalore and Nagapattinam) to promote investment and industrial development in these sectors.

4.2 The PCPIRs were conceptualized in a cluster approach to promote Petroleum, Chemical and Petrochemical sectors in an integrated and environment friendly manner on a large scale. Government of India formulated the PCPIR policy in April, 2007 to give a boost to this sector.

4.3 Each PCPIR is a specifically delineated investment region having an area of about 250 sq. km (with around 40% of the area earmarked for processing activities). It is not mandatory for the State Government concerned to acquire the entire area comprising the PCPIR, but they have to notify the area under the relevant area planning and zoning law.

4.4 The State Governments concerned carry out Environmental Impact Assessment (EIA) and lead the project implementation. Government of India ensures the availability of external physical infrastructure linkages to the PCPIR including connectivity through Railways, Roads, Ports, Airports and Telecom etc. through Public Private Partnership projects to the extent possible. The Central Government also provides necessary funding to make such projects viable, in the form of Viability Gap Funding (VGF), as well as budget support for creation of these linkages wherever required.

4.5 The policy provides that each PCPIR would have a refinery / petrochemical feedstock company as an Anchor Tenant.

4.6 The State Government notifies a nodal Department or agency for coordinating the linkages. A Management Body constituted by the State Government for each PCPIR, under relevant legislation, is responsible for the development and management of the PCPIR.

4.7 Once fully established, these four PCPIRs are expected to attract investment of around Rs. 7.63 lakh crore. As per data available from State Governments, investments worth Rs. 1.90 lakh crore approximately have been made / committed in these regions. The four PCPIRs are expected to generate employment for around 33.83 lakh persons. Around 3.30 lakh persons have been employed in direct and indirect activities related to PCPIRs.

4.8 DCPC initiated work on preparation of a Perspective Plan for the petrochemical industry. In this regard, a Committee co-chaired by Secretary, Ministry of Petroleum & Natural Gas and Secretary, Department of Chemicals and Petrochemicals has been constituted to examine the whole issue of petrochemical demand & supply over next 15 to 20 years and to recommend policy options to the Government including recommendations regarding amendments to the existing PCPIR policy.

4.9 The status of implementation and execution of these projects is as follows:

Indicator	Gujarat	Andhra Pradesh	Odisha	Tamil Nadu
Location/ Region	Dahej, Bharuch	Vishakhapatnam – Kakinada	Paradeep	Cuddalore-Nagapattinam
Date of Approval	Feb, 2009	Feb, 2009	Dec, 2010	July,2012
Date of MoA	07.01.2010	01.10.2009	03.11.2011	20.02.2014
Total Area (Sq. kms.)	453.00	640.00	284.15	256.83
Processing Area (Sq.kms.)	248.00	270.00	123.00	104.00
Anchor Tenant	ONGC Petro Additions Limited (OPaL)	Yet to be finalized	Indian Oil Corporation Ltd. (IOCL)	Proposed Anchor Tenant was Nagarjuna Oil Corporation Limited against which liquidation process has been ordered by NCLT. State Government of Tami Nadu is in the process of identifying another anchor unit.
Refinery / Cracker capacity in MMTPA	Cracker: Ethylene: 1.1 Propylene: 0.6	Yet to be finalized	15 (Greenfield refinery).	
Anchor Project Status	Commissioned	Yet to be finalized	Commissioned in February, 2016.	

Amount of approved infra. Projects (Rs. crore)*	NA	18,731.00	13,634.00	13,354.00
GoI share in form of VGF (Rs. crore)	80.50	1206.80	716.00	1143.00 budgetary support-1500)
Total proposed investments	50,000.00	3,43,000.00	2,77,734.00	92,500.00
Investments made (Rs. Crore)	90,732.00	46,729.38-Committed & 13845.04 – Actual made so far	45,000.00	8,100.00
Projected employment (No.)*	8,00,000	11,98,000	6,48,000 (Revised)	7,37,200
Employment generated (No.)	1,60,000	1,18,675	38,260	13,950
Status of Master Plan notification	Development Plan sanctioned.	Field Studies, village level consultations completed. Once the Anchor unit finalizes location, configuration and capacity of the Cracker Complex etc., Master Plan will be finalized.	Preparation of Master Plan is in process.	Will be taken up after formation of PCPIR Management Board.
Status of EIA	Environmental Clearance & Coastal Region Zone (CRZ) clearance received.	Environmental Clearances, EIA Studies, Collection of Baseline Data etc. completed. Once the Master Plan finalized based on location, configuration and capacity of the Cracker Complex the public hearing will be conducted and will be processed for Environmental Clearance.	EIA Study is in process.	Will be taken up after formation of PCPIR Management Board.

* At the approval stage of the projects.

Status of Implementation of PCPIRs

4.10 Gujarat PCPIR

- Gujarat PCPIR has been notified under the Gujarat Special Investment Region (GSIR) Act, 2009. It is strategically positioned to the east of Delhi-Mumbai Industrial Corridor (DMIC) and near the western coastline of India.
- The Gujarat Infrastructure Development Corporation (GIDC) has made an investment of around Rs. 16,864 crore for infrastructure development in the PCPIR.
- The Anchor Tenant, viz. M/s ONGC Petro additions Ltd. (OPaL), has spent around Rs. 27,700 crore on the project. The project has been commissioned in 1st week of March, 2017.
- Ministry of Environment, Forest and Climate Change (MoEF&CC) has granted Environment and Coastal Region Zone (CRZ) clearance on 14.09.2017 for an area of 44445.18 hectare for development of Gujarat PCPIR. Environmental Clearances & Coastal Region Zone have been received from MoEF&CC.

4.11 Andhra Pradesh PCPIR

- Special Development Authority (SDA) was formed by Government of Andhra Pradesh in May, 2008 to implement the PCPIR.
- AP PCPIR covers 06 existing SEZs. The committed investment in AP PCPIR is around Rs. 46729.38 crore. Investment of Rs. 1919.13 crore appx. have been made on infrastructure development.
- Hindustan Petroleum Corporation Limited (HPCL) and GAIL have conducted pre-feasibility study. Discussions are going on between Government of Andhra Pradesh and M/s HPCL & GAIL on Viability Gap Funding and other support / incentives.
- Road, rail link, water supply, effluent treatment and marine outfall projects are under different stages.

4.12 Odisha PCPIR

- Detailed Master Plan for industrial development of PCPIR area shall be prepared by PCPIR Authority. Industrial Development Corporation of Odisha (IDCO) has selected a consultant for preparation of Master Plan of the region. Draft detailed Master Plan has already been completed.
- Indian Oil Corporation's 15 MMTPA Refinery at Paradeep was commissioned in February, 2016. IOCL will set up a 730 Kilo Tonne per Annum (KTA) Polypropylene Unit which can be utilized in the proposed Plastic Park at the same PCPIR location. IOCL has also planned to set up Mono-ethyle Glycol, Paraxylene-PTA & Petcoke gasification units for availability of raw materials in time bound and cost effective manner in Paradeep PCPIR.

- Detailed Environmental Impact Assessment (EIA) is being undertaken by Environmental Protection Training and Research Institute (EPTRI), Hyderabad. This study will ascertain the actual number of displacement. Accordingly, rehabilitation will be taken up as per Odisha Resettlement and Rehabilitation Policy, 2006. Terms of Reference (ToR) have been received from Ministry of Environment, Forest and Climate Change (MoEF&CC). Detailed studies are underway by the consultant on points raised by MoEF&CC.

4.13 Tamil Nadu PCPIR

- An area of about 24,692 hectares in 45 villages of Cuddalore and Chidambaram Talukas of Cuddalore District and Sirkazhi and Tarangambadi villages of Nagapattinam district have been notified as PCPIR under the Tamil Nadu Town and Country Planning Act 1971 in January, 2016. Government of Tamil Nadu in its order dated 20.06.2017 has notified the PCPIR area as a Local Planning Area under the Tamil Nadu Town and Country Planning Act, 1971.
- Proposed Anchor Tenant was Nagarjuna Oil Corporation Limited against which liquidation process has been ordered by National Company Law Tribunal (NCLT). State Government of Tami Nadu is in the process of identifying another anchor unit.
- State Government is in the process of TN PCPIR Development Authority under Tamil Nadu Town and Country Planning Act, 1971 and formation of TN PCPIR Management Board as a Special Purpose Vehicle.
- Upon formation of TN PCPIR Management Board, preparation of Master Plan, Environmental Studies would be undertaken.

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Chapter – 5

NEW SCHEMES OF PETROCHEMICALS

The Department of Chemicals and Petrochemicals is implementing the following three schemes under the National Policy on Petrochemicals:-

(i) National Awards for Technology Innovation in Petrochemical and downstream Plastic Processing Industry

(ii) Setting up of Centres of Excellence in Polymer Technology

(iii) Setting up of Plastic Parks

National Awards for Technology Innovation in Petrochemical and downstream Plastic Processing Industry

5.1 The Department is implementing an Award Scheme to provide incentive for meritorious innovations & inventions in various fields of petrochemicals and downstream plastics processing industry. Central Institute of Plastic Engineering and Technology (CIPET) is entrusted with the task of seeking and short-listing nominations for the scheme. The Department has been providing a grant-in-aid to CIPET each year for administering the award scheme. Presently, the Scheme is being operated as sub-scheme of the Chemicals Promotion and Development Scheme.

5.2 The National Awards for Technology Innovation are given in various categories for innovation in areas such as Polymeric Materials, Polymeric Products, Polymer Waste Management and Recycling Technology and related areas. In a ceremony held on 24th January, 2019 at Chennai, the Hon'ble Vice-President gave away the 8th National Awards. The Awards covered six categories of New Polymers, New Applications of Polymer in various fields, viz., New Polymer Processing Machines including Energy Efficiency, Innovation in Polymer Waste Management and Recycling, Green/ Bio-degradable Polymer, Innovation in Packaging covering 22 sub-categories. Unlike the previous edition of Awards, in the 8th edition, the distinction of individual, industry and institutions as separate categories has been done away, with focus on innovation. Further, the price money for winners was enhanced to Rs. 3 Lakhs, while for the first time, a prize money of Rs. 1 Lakh was given to the runners up.

Setting up of Centres of Excellence (CoE) in Polymer Technology

5.3 The scheme aims at improving the existing petrochemicals technology and research in the country and to promote development of new applications of polymers and plastics. In phase-I of the Scheme implemented up to the 2017, the Government of India provided financial support to the extent of maximum of 50% of the total cost of the project subject to an upper limit of Rs. 6 Crore over a period of 3 years. The Department set up five Centres of Excellence (CoE) within the premises of reputed educational/research institutes with the details as below:-

(i) National Chemicals Laboratory (NCL), Pune – CoE for Sustainable Polymer Industry through Research, Innovation & Training (CoE-SPIRIT);
(ii) Central Institute of Plastics Engineering & Technology (CIPET), Chennai – CoE for Green Transportation Network (GREET),
(iii) IIT, Delhi – CoE for Advanced Polymeric Materials,
(iv) CIPET, Bhubaneswar- CoE on Sustainable Green Materials and
(v) IIT, Guwahati – CoE for Sustainable Polymers.

5.4 The CoE at Pune and CoE at CIPET, Chennai were approved during the 11th Five Year Plan and remaining three CoEs were approved during the 12th Five Year Plan. The Government of India grant of Rs. 6 crore has been released to the each of them and funding process completed in respect of them.The assets created under CoE-SPIRIT at NCL, Pune have resulted in a boost to contemporary research in Polymer science, and also contributed to the training of several members of polymer industry and academia. In case of CoE- GREET at CIPET, Chennai and CoE on Sustainable Green Materials at CIPET, Bhubaneswar, the outputs are in terms of promoting academic, research and educational excellence through partnership between CIPET, India and University of Toronto, Canada and Michigan State University, USA. At IIT, Delhi and IIT, Guwahati, the resources and capabilities are being strengthened for furthering research activities in Advanced Polymeric Materials and Sustainable Polymers, respectively.

5.5 The Scheme is now extended upto year 2020 with modified guidelines which aim at promoting applied research and technology transfer from Lab to Industry and funding of Rs 5 crore per CoE. Three Centres of Excellence have been sanctioned, namely, IIT Roorkee, CIPET Bhubaneswar and NCL, Pune. An amount of Rs. 2.07 crore has been released to IIT, Roorkee and CIPET, Bhubaneswar each during the financial year.

Setting up of Plastic Parks

5.6 The scheme aims at setting up of need based plastic parks, an ecosystem with state-of-the-art infrastructure and enabling common facilities through cluster development approach, to consolidate and synergize the capacities of the domestic downstream Plastic Processing Industry. The larger objective of the scheme is to contribute to the economy by increasing investment, production, export in the sector and also generation of employment.

5.7 Under the scheme, the Government of India provides grant funding up to 50% of the project cost, subject to a ceiling of Rs. 40 crore per project. The remaining project cost is funded by the State Government or State Industrial Development Corporation or similar agencies of State Government, beneficiary industries and loan from financial institutions.

5.8 Under the scheme of Plastic Parks, in phase-I, Plastic Parks in States of Madhya Pradesh, Odisha, Tamil Nadu and Assam are being set up. These are under various stages of implementation. During the year under report the Department has released a further sum of Rs 10 crore to the Odisha Plastic Park. A sum of Rs. 0.80 crore has been released to the SPV for setting up a Plastic Park at Tamot, Madhya Pradesh. Further as part of phase-II of the Scheme, Plastic Parks at Jharkhand and Bilaua in Madhya Pradesh have been granted 'final approval' and Rs. 2.00 crore each released as first instalment.

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Chapter – 6

INTERNATIONAL CONVENTIONS AND TREATIES

Chemical Weapons Convention (CWC)

6.1 India is a signatory and party to the Chemical Weapons Convention (CWC), the Organization for the Prohibition of Chemical Weapons (OPCW) with Head Quarters at The Hague, Netherlands. The Convention is a universal, non-discriminatory, multi-lateral, disarmament treaty which prohibits the development, production, stock-piling and use of chemical weapons and monitors its elimination in order to secure chemical weapons free world. India signed the treaty at Paris on 14th day of January 1993. India, pursuant to provisions of the Convention enacted the Chemical Weapons Convention Act, 2000. As on date, 193 countries are parties to the Convention. India was the First State Party to secure the distinction of chemical weapon free state Party by destructing all its stockpile of its chemical weapons amongst all State Parties of the Convention.

Rotterdam Convention

6.2 Rotterdam Convention on Prior Informed Consent Procedures (PIC) that entered into force on 24th February, 2004, is a legally binding instrument, which was adopted on 10th September 1998 by a Conference of Plenipotentiaries in Rotterdam. India acceded to the Convention on 24.05.2006.

6.3 The Convention seeks to promote shared responsibility and cooperative efforts among State Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm. It also seeks to contribute to the environmentally sound use of these hazardous chemicals by facilitating information exchange about their characteristics, providing for a national decision making process on their import and export, and by disseminating these decisions to the Parties.

6.4 Each Party is required to designate a National Authority for performing the administrative functions required under the Convention. Department of Chemicals and Petrochemicals is the Designated National Authority (DNA) for industrial chemicals and Department of Agriculture and Co-operation is the DNA for pesticides.

6.5 There are a total of 50 chemicals listed in Annex III, 34 pesticides (including 3 severely hazardous pesticide formulations), 15 industrial chemicals, and 1 chemical in both the pesticide and the industrial chemical categories. The parties are required to communicate their import policy for these chemicals to the PIC Secretariat. The exporting party has to provide the export notification to the importing party in respect of banned or severely restricted chemicals in the importing country. The export notifications received from other parties for industrial chemicals are examined by Department of Chemicals and Petrochemicals, being the DNA for industrial chemicals, and acknowledgment/ reply is sent to the DNA of the exporting country.

Stockholm Convention

6.6 The Stockholm Convention, ratified by India on 13.01.2006, is a global treaty to protect human health and environment from Persistent Organic Pollutants (POPs). POPs are chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of living organisms and are toxic to human beings and wildlife. POPs travel globally and can cause damage wherever they travel. The Convention that entered into force of 17th May, 2004, lays down that in its implementation, Governments will take measures to eliminate or reduce the release of POPs into the environment.

6.7 The Stockholm Convention seeks the elimination or restriction of production and use of all intentionally produced POPs (industrial chemicals and pesticides). The Convention also seeks the continuing minimization and wherever feasible, ultimate elimination of the releases of unintentionally produced POPs such as dioxins and furans. At present, twenty one chemicals are covered under the Stockholm Convention, of which use of DDT is restricted in India. Use of DDT is banned for agricultural purposes; it is produced in a restricted manner for use in vector control only, as India has obtained exemption for use of DDT for vector control.

6.8 Stockpiles and wastes containing POPs must be managed and disposed of in a safe, efficient and environmentally sound manner, taking into account international rules, standards and guidelines. Each country is required to develop a plan for implementing its obligations under the Convention. A Global Environment Facility (GEF) has been set up as an interim financial mechanism, to assist the developing countries in implementation of the convention.

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Chapter – 7

BHOPAL GAS LEAK DISASTER

7.1 On the intervening night of 2nd /3rd December, 1984, "Methyl Iso Cynate" (MIC) a lethal gas stored in two tanks of the Union Carbide Pesticide Factory at Bhopal leaked in the atmosphere resulting in industrial mass disaster unparallel in its magnitude and causing serious injuries to a large number of populations of Bhopal city, also resulting in immediate death toll of thousands of human lives. Various relief and rehabilitation measures initiated immediately after the disaster are still continuing.

Adjudication of Compensation Claims

7.2 Several suits were filed for compensation and damage in different courts in India. Prosecution had also been launched. The Government of India enacted an act known as the Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985. The Act came into force on 20th February, 1985. It empowered the Union of India to take over the conduct of all litigation in regard to claims arising out of gas disaster and to award compensation to the victims and affected persons. Under this Act, the Government has framed a scheme known as the Bhopal Gas Leak Disaster (Registration and Processing of Claims) Scheme, 1985 for registration, processing, determination of compensation to each claim and appeals, if any, arising there from. Under this Act, the Office of the Welfare Commissioner, Bhopal Gas Victims, was set up by the Government of India for speedy adjudication and award/disbursement of compensation to the survivors and families of the victims of the gas leak disaster.

7.3 Looking to the magnitude of the human suffering that occurred due to BGLD, Hon'ble Supreme Court of India passed a settlement order dated 14th and 15th February, 1989 directing the Union Carbide Corporation to pay a sum of US $ 470 million, which was deposited by the Company with the Registrar of the Supreme Court of India, in 1989.

Original Compensation

7.4 The actual disbursement of the compensation started from 1992 and the

Office of the Welfare Commissioner awarded/disbursed Rs.1548.61 crore as compensation in settled cases of 5,74,391 claimants belonging to the categories of death, permanent disability, temporary disability, injury of utmost severity cases, minor injury, loss of property/PSU and loss of livestock.

Pro-rata Compensation

7.5 The Supreme Court vide order dated 19th July, 2004 had directed the Welfare Commissioner to disburse the balance amount of approximately Rs. 1500 crore, which had accumulated with the Reserve Bank of India on account of accrual of interest and exchange rate variation, on pro-rata basis (in the ratio of 1:1 of original compensation) to the claimants whose cases had been settled. The distribution of pro-rata compensation started from November, 2004. A sum of Rs.1517.80 crore as pro-rata compensation has been awarded in 5,63,108 cases till March, 2019. The work of disbursal of pro-rata compensation is continuing.

Disbursement of Ex-gratia

7.6 On the recommendations of the Group of Ministers (GoM) constituted on Bhopal Gas Leak Disaster, the Government took certain decisions to provide further relief and rehabilitation to the gas victims in the year 2010. One of the major decisions taken by the Government was to pay ex-gratia to the following categories of gas victims:

Categories of Ex-gratia payments to Gas victims

Category	Scale of Ex-gratia
Death	Rs.10 lakh (less amount already received)
Permanent disability	Rs. 5 lakh (less amount already received)
Injury of utmost severity	Rs. 5 lakh (less amount already received)
Cancer	Rs. 2 lakh (less amount already received)
Total Renal Failure	Rs. 2 lakh (less amount already received)
Temporary disability	Rs. 1 lakh (less amount already received)

7.7 An amount of Rs. 874.28 crore has been approved by the Government for disbursement of ex-gratia amongst the above categories of victims. The Office of the Welfare Commissioner has commenced disbursal of ex-gratia to the Gas victims on 19th December, 2010. Till March, 2019, 60,712 cases have been decided and an amount of Rs. 822.53 crore has been awarded.

Rehabilitation of Bhopal Gas Victims (Action Plan)

7.8 Rs. 102 crore was sanctioned by the Government of India for relief, rehabilitation and financial assistance to victims of gas tragedy from 1985 to 1989.

7.9 In 1990, The Government of India approved a 5-year Action Plan of the State Government of Madhya Pradesh with a capital outlay of Rs. 163.10 crore for the Medical, Economic, Social and Environmental rehabilitation of the Bhopal Gas victims. The outlay was subsequently revised upwards to Rs. 258 crore. It was decided that the Action Plan was to be shared by the Government of India and State Government of Madhya Pradesh (GoMP) in the ratio of 75:25 and implemented by the GoMP. The Action Plan was implemented from 1990 to 1999. This involved creation of infrastructure for providing relief and rehabilitation to the gas victims. Against this approved plan, GoMP spent an amount of Rs. 309.53 crore. The major component of the Action Plan was Medical Rehabilitation which included establishment of six full-fledged Gas Relief hospitals and also dispensaries for free treatment of gas victims.

7.10 Further, Rs. 14.18 crore was provided by the Government of India under Jawaharlal Nehru National Urban Renewal Mission (JNNURM), in April, 2006 for supply of piped drinking water to 14 localities around UCIL plant site where the ground water is not potable.

7.11 GoMP had submitted to Group of Ministers (GoM) in April 2008, a new Memorandum on New Plan of Action with an outlay of Rs. 982.75 crore for various rehabilitation measures to be taken for Bhopal Gas Victims. The Government, on the recommendations of the GoM, approved a sanction of Rs. 272.75 crore shared between the Central Government and GoMP in the ratio of 75:25 for implementation of New Plan of Action, 2010. A sanction of Rs. 272.75 crore was released by the Ministry of Finance, Department of Expenditure to the GoMP on 08/07/2010 'On Account' payment of Additional Central Assistance (ACA) for other projects (Grant Component) for State's Annual Plan 2010-2011.

7.12 The GoMP has apprised that an amount of Rs.130.29 crore has been utilized against the approved plan of Rs. 272.75 crore. GoMP is in the process of implementation of various rehabilitation schemes as approved in the New Plan of Action 2010 as under:

Social Rehabilitation

7.13 An estimated 5000 Widows of Gas Victims are to be paid pension plan of Rs.1000 per month for a period of five years, for which Rs. 30 crore has been allocated. An amount of Rs. 25.43 crore has been disbursed as widow pension to 4,995 beneficiaries.

7.14 A sum of Rs. 40 crore has been allocated for construction of houses for dependants/families of gas victims residing in the vicinity of UCIL factory. As per the proposal, the entire locality was to be shifted to a safe place and houses were to be provided for habitants of the locality. The GoMP has now provided safe drinking water by pipeline, so there is no need to shift those habitants staying around the UCIL factory. Therefore, GoMP made a proposal seeking approval for an amount of Rs. 25 crore out of the unspent balance of Rs 39.36 Crore under Social Rehabilitation scheme, for providing assistance to the 2,500 Bhopal Gas Victims, who do not have pucca dwelling houses, under "Pradhan Mantri Awas Yojana (Urban), Ministry of Housing and Urban Affairs, Government of India. Necessary administrative approval in this regard was accorded by the Department to the GoMP to implement the scheme.

Medical Rehabilitation

7.15 Most of the essential equipment for Gas Rahat Hospitals have been procured, installed and are functioning. The work of construction and renovation of Hospital buildings were completed. Out of Rs. 272.75 crore, a sum of Rs. 33.55 crore was allotted for Medical Rehabilitation. GoMP had utilized a fund of Rs. 16.32 crore and sought an administrative approval to utilize the unspent balance fund of Rs. 17.23 crore under Medical Rehabilitation for execution of certain new items of work such as construction of Bone Marrow Transplant Centre and procurement of equipment at Kamla Nehru Hospital, Renovation of civil work for Modular OT for four Hospitals, namely, Indira Gandhi Women and Child Hospital, Khan Shakir Ali Khan Hospital, Jawaharlal Nehru Hospitals Bhopal and Kamla Nehru Hospital. The same was accorded by the Department to the GoMP.

Economic Rehabilitation

7.16 For ensuring employment to the gas victims, the GoMP launched an

entrepreneurship training Programme scheme with built-in employment opportunity. GoMP selected 21 institutes through a transparent procedure, for providing training in different trades to the gas victims. The State Govt. has provided training to 12,355 gas victims beneficiaries under different traits. Initially, this programme was successful but could not achieve desired outcome later on. As the scheme was not attractive, GoMP has submitted a proposal seeking approval for an amount of Rs. 25.12 crore from the unspent balance of Rs. 85.87 crore under Economic Rehabilitation scheme, for the purpose of providing self-employment to the beneficiaries of gas victims under "Mukhyamantri Swarojgar Yojna" (Chief Minister Self Employment scheme) which include Rs. 1.00 crore for component of appropriate/relevant training. Necessary administrative approval in this regard was accorded by the Department to the GoMP to implement the scheme.

Environmental Rehabilitation

7.17 Out of Rs. 50 crore allocated for providing clean drinking water to the gas victims, GoMP utilized the entire fund for providing safe drinking water in Gas affected area.

Bhopal Memorial Hospital and Research Centre (BMHRC)

7.18 On the directions of the Hon'ble Supreme Court, a Specialty Hospital named Bhopal Memorial Hospital and Research Centre (BMHRC) was established at Bhopal with money provided by Union Carbide Company, for free treatment of gas victims. The Hospital with super specialty facilities started functioning in July, 2000. The Hospital has 330 beds with facilities in 12 disciplines like Cardio Thoracic Surgery, Nephrology, Urology, Neurology, Neuro Surgery, Ophthalmology, Pulmonary Medicine, Psychiatry, etc. 8 (eight) mini units of the Hospital have been set up in various gas-affected wards in Bhopal for the gas victims.

7.19 Initially, management of the hospital was overseen by a Trust named the Bhopal Memorial Hospital Trust (BMHT) under the Chairmanship of retired Chief Justice of India Shri A. M. Ahmadi. On the recommendations of the GoMP and as decided by the Government, the administration of BMHRC has been taken over by the GoI in the year 2010 and the Hospital is now administered by the Department of Health Research, Ministry of Health and Family Welfare.

Indian Council Medical Research (ICMR)- 31st Research Center

7.20 After the gas leak, Indian Council Medical Research (ICMR) had established a research centre in Bhopal in 1984 and conducted epidemiological research and clinical studies. After publication of research papers in 1987 and 1994, ICMR stopped its research work on 31.12.1994 and handed over the research centre (centre for Rehabilitation Studies) to the Govt. of M.P. The Government, based on recommendation of the GoMP, decided that ICMR may resume its research on gas victims by establishing a full-fledged Research Centre in Bhopal. Accordingly, ICMR has established its 31st Research Centre namely "National Institute for Research in Environmental Health (NIREH)" at Bhopal, on 11th October, 2010, for conducting research studies in identified areas including respiratory diseases, cancer, total renal failure, genetic disorders, second generation children related medical issues. ICMR as well as NIREH have been carrying out the research work on the health problems of the gas victims with exactitude and expeditiousness and ensuring disbursement of its benefit to the gas victims.

Environmental Remediation of the erstwhile Union Carbide India Ltd. (UCIL) Plant site

7.21 As per Union Cabinet's decision taken in the year 2010, the GoMP would be responsible for undertaking disposal of hazardous wastes and remediation of the erstwhile UCIL plant at Bhopal. As per Cabinet's decision, an Oversight Committee was constituted in the Ministry of Environment, Forest and Climate Change to provide oversight and support to the GoMP in taking the necessary remedial actions. Hon'ble Supreme Court is seized with the issue of disposal of UCIL waste in the matter of SLP (Civil) No. 9874 of 2012 UoI Vs Alok Pratap Singh and Others. Ministry of Environment, Forest and Climate Change is complying with the orders issued by the Hon'ble Supreme Court then and there. As per the directions given by the Hon'ble Supreme Court, 10 MT of erstwhile UCIL waste was successfully incinerated at Common Hazardous Waste Incinerator at Pithampur, Madhya Pradesh by Central Pollution Control Board (CPCB) during August 13-18, 2015.

7.22 For disposal of remaining 337 MT (approximate) of hazardous waste lying at UCIL factory site, CPCB has assisted the GoMP for preparation of Request For Proposal (RFP) documents for inviting competitive bids for hiring operators of common Hazardous Waste Incinerator (TSDFs) for disposal of the remaining

waste. The floating of tender for procurement of incineration services is under process by the GoMP. GoMP will come out with a proposal for remediation of contaminated sites in and around UCIL premises.

Curative Petition

7.23 On the direction of the Cabinet, a Curative Petition No. 345-347 was filed in December 2010 by Union of India V/s Union Carbide Corporation (UCC), USA, Dow Chemicals, USA and Others claiming enhanced compensation from UCC and/ or successor companies of UCC, by seeking a review of the Court's earlier judgment of 1989, settling the compensation amount at US $470 million. The compensation claimed in the Curative Petition is due to the difference between the number of cases assumed by the Hon'ble Supreme Court at the time of passing the orders for settlement in 1989 and the actual number of cases awarded by the Office of the Welfare Commissioner, Bhopal Gas victim, Bhopal. The petition also claims reimbursement of costs incurred by the Government of India for various rehabilitation measures for victims and the amount required for environmental remediation. The case is pending before the Hon'ble Supreme Court.

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Chapter -8

PUBLIC SECTOR UNDERTAKINGS

Assam Gas Cracker Project (Brahmaputra Cracker and Polymer Limited)

8.1 The Assam Gas Cracker Project (AGCP) was initiated in pursuance of the Memorandum of Settlement signed between Central Government and All Assam Students Union (AASU) and All Assam Gana Sangram Parishad (AAGP) on 15th August 1985. This Project is of economic significance for the States of Assam and North East Region. Cabinet Committee on Economic Affairs (CCEA), in its meeting held on 18th April, 2006, approved the setting up of the Assam Gas Cracker Project (AGCP) at a project cost of Rs. 5460.61 crore (fixed cost). A joint venture company namely M/s Brahmaputra Cracker and Polymer Limited (BCPL) was formed to implement the project. Owing to various reasons, the project has witnessed time and cost overruns. The Revised Cost Estimate (RCE-I) of Rs. 8920 Crore (on "as built basis") was approved by the CCEA on 16th November, 2011 with mechanical completion by July, 2013 and commissioning by December, 2013.

8.2 Due to further time and cost overruns the Revised Cost Estimate-II (RCE-II), as approved by the Hon'ble Minister (C&F) in July, 2016, was Rs.9965 crore comprising capital subsidy of Rs. 5,239 crore, debt of Rs. 3,308 crore and equity of Rs. 1,418 crore as against the earlier approved project cost of Rs.8,920 crore (RCE-I) with the revised schedule of commissioning of the project by December, 2015. The estimated increase in project cost of Rs. 1045 crore to be funded by capital subsidy of Rs. 549 crore, equity of Rs. 149 crore and debt of Rs. 347 crore. Out of total capital subsidy of Rs.5,239 crore, Rs.4,990 crore has been released till March, 2019. Balance capital subsidy is Rs.249.5 crore.

8.3 The Project was finally commissioned on 2nd January, 2016 and dedicated to the nation on 5th February, 2016 by Hon'ble Prime Minister. Soon after the commissioning and stabilization, the plant operation got affected due to issues like inadequate supply of feedstock. All efforts are made to enhance the capacity utilization. In the current financial year 2018-19, the plant has been operating at more than 100% capacity till 31.03.2019.

8.4 A Co-ordination Committee of stake-holders was constituted on the recommendation of Standing Committee on Chemicals & Fertilizers to resolve the feedstock problems and other operational issues being faced by BCPL, which has held two meetings so far.

HINDUSTAN ORGANIC CHEMCIALS LIMITED (HOCL)

8.5 Hindustan Organic Chemicals Limited (HOCL) was incorporated on 12th December, 1960 as a Government company with the objective of setting up manufacturing capacities for chemicals / intermediates required for production of dyes, dyes–intermediates, rubber chemicals, pesticides, drugs and pharmaceuticals, laminates, etc. The company had two manufacturing units located at Rasayani (Maharashtra) and at Kochi (Kerala). The Rasayani unit (Chemical Complex) started production from 1970-71 and the Kochi Unit (Phenol Complex) commenced production from 1987-88. The Kochi unit has plants to manufacture Phenol, Acetone and Hydrogen Peroxide. After the implementation of restructuring plan for HOCL that was approved by the Government of India on 17.05.2017, all plant operations of Rasayani unit have been closed down except the strategically important Concentrated Nitric Acid (CNA)/ Di-nitrogen Tetroxide (N_2O_4) plant which has been transferred to the Department of Space/ISRO. The CNA/ N_2O_4 plant is the only facility for production of N_2O_4 in India which is used exclusively by ISRO in its rocket launching programme. HOCL has a subsidiary company, namely Hindustan Fluorocarbons Limited (HFL), located at Rudraram, Telangana, details regarding which are given further in this chapter.

8.6 HOCL's authorised and paid up share capital is Rs.370 crore and Rs.337.27 crore [comprising of Rs.67.27 crore equity and Rs.270 crore preference shares] respectively. 58.78% of the equity of the company (excluding preference shares) is held by the Govt. of India. HOCL is listed on the Bombay Stock Exchange (BSE).

8.7 Following globalization and liberalisation of the Indian economy in the early 1990's resulting in competition from international players, HOCL incurred losses for the first time in 1997-98. Due to continued losses leading to negative net worth by 2003-04, the company was referred to erstwhile BIFR in February, 2005. Based on the recommendations of Board for Reconstruction of Public Sector Enterprises (BRPSE), Govt. approved a revival package for the company

on 9th March, 2006 providing (i) cash infusion of Rs.270 crore by way of preference share capital (redeemable) for repayment of high interest bonds, bank loans and implementation of VRS and (ii) continuation of Govt. of India guarantee of Rs.100 crore for full term of 10 years to be utilised to liquidate high cost debt. After implementation of the revival package, the company made profits during 2006-07 and 2007-08 and came out of BIFR.

8.8 However, the company again suffered losses in 2008-09 and 2009-10 mainly due to recessionary trend in the market as an effect of global meltdown. Though it earned profit during 2010-11, the situation worsened thereafter with losses during 2011-12 and 2012-13 mainly due to withdrawal of anti-dumping duties on its main products phenol and acetone. In order to enable the company to tide over its liquidity problems, the Govt. on 1st August, 2013 approved postponement of redemption of Rs.270 crore preference shares issued to the Govt. of India (date of allotment 24.01.2008), which was due for redemption from 2011-12 onwards, to 2015-16 onwards. The Govt. guarantee of Rs.100 crore was also further extended up to August, 2017.

8.9 Further, Govt. guarantee of Rs.150 crore was provided to HOCL in July, 2014 for issue of bonds by the company for meeting its working capital requirement and payment of liabilities towards raw material suppliers, employee dues, etc. This enabled the company to restore manufacturing operations at its Kochi and Rasayani units. However, the global fall in the prices of petroleum products at that time caused severe crash in the prices of Phenol and Acetone and the company faced difficulties in selling the products at profitable rates and generating adequate working capital. This led to frequent shutting down of operations at both Kochi and Rasayani units thereby further aggravating the financial crisis of HOCL. Due to continuous losses and shortage of working capital, the company was not able to pay regular salary and statutory dues to the employees since February, 2015. Following implementation of restructuring plan for HOCL (refer para 8.12 to 8.14 below), the plant operations of Rasayani unit have been closed down. The Phenol/Acetone plant at Kochi unit resumed operations from July 2017 and is being operated regularly since then.

Financial Performance

8.10 Financial performance of HOCL in terms of turnover and net profit / loss for the last 5 years and net worth as on 31.3.2019 are given below:

(Rs. in crore)

Year	Turnover (Gross)	Net Profit / (Loss)
2013-14	236.80	(176.85)
2014-15	167.19	(215.49)
2015-16	120.79	(173.91)
2016-17	158.21	(255.57)
2017-18	242.33	(199.47)
2018-19	471.99	73.01
	Net-Worth as per the Audited Accounts (as per new accounting standard Ind AS which includes revaluation of land and other assets) as on 31.03.2019: (+)Rs.105.24 crore Net-Worth as per the Companies Act (excluding revaluation of land and other assets) as on 31.03.2019: (-)Rs. 958.72 crore	

8.11 During 2018-19, the company earned total revenue of Rs. 589.92 crore (including other non-operational income of Rs. 117.93 crore from disposal of assets of Rasayani unit, reversal of excess provisions etc.) and made net profit of Rs. 73.01 crore, as per the audited results.

Restructuring plan for HOCL

8.12 The Government of India on 17.05.2017 approved a restructuring plan for HOCL which involves (i) closing down operations of all the non-viable plants at Rasayani unit of HOCL, except N_2O_4 plant which is to be transferred to ISRO on 'as is where is' basis, with about 20 acres of land and employees associated with the plant. The N_2O_4 plant is of strategic importance as it is the only indigenous source of N_2O_4 which is used as liquid rocket propellant by ISRO in the space launch vehicles. Financial implication of the restructuring plan is Rs.1008.67 crore (cash) which is to be met partly from sale of 442 acres HOCL land at Rasayani to Bharat Petroleum Corporation Ltd. (Rs.618.80 crore) and the balance (Rs.365.26 crore) through bridge loan from the Govt. The funds are to be used to liquidate the various liabilities of the company, including payment of outstanding salary and statutory dues of employees and repayment of Govt. guaranteed bonds of Rs.250 crore, and for giving VRS/VSS to the Rasayani unit employees except those retained as skeletal staff. The bridge loan amount, along with other Govt. liabilities of the company, is to be repaid to the Govt. from the disposal of remaining unencumbered land and other assets of Rasayani unit.

8.13 Status of implementation of restructuring plan of HOCL (as on 20.05.2019) is as follows:

- All plants of Rasayani unit except N_2O_4 plant have been closed down. Closure of the unit under the provisions of Industrial Disputes Act, 1947 has also been approved by the Ministry of Labour & Employment.
- N_2O_4 plant has been transferred to ISRO along with 20 acres land and 131 employees associated with plant.
- Out of 442 acres land at Rasayani to be sold to BPCL, 290 acres have been sold. Process for sale of balance land is underway.
- Sale of 85 acres out of the additional 242 acres (+/- 10%) land approved for sale to BPCL has also been completed. Sale & registration of another 80 acres is expected to be completed shortly.
- Lease transfer of 1000 sq m land at Kharghar, Navi Mumbai, to NALCO has been completed.
- BPCL has submitted EoI for the remaining 250+ acres unencumbered land at Rasayani. Final offer is awaited.
- Panvel land (8 acres) was put up for e-auction on 24.4.2019 but no bid/offer was received. Further course of action is under consideration of HOCL.
- All the 10 Nestle flats (Mumbai), closed down plants and utility blocks have been successfully e-auctioned through MSTC.
- All the employees have been separated through VRS/VSS except skeletal staff (7) for HOCL's corporate office and some VRS optees temporarily retained for implementing the restructuring plan. 23 employees who did not opt for VRS were transferred to the Kochi unit.
- Bridge loan of Rs.360.26 released by the Govt. in Aug.-Sept. 2017 has been utilized by HOCL to redeem the two Govt. guaranteed bonds totalling Rs.250 crore and for part payment of priority statutory dues.

8.14 After implementation of the restructuring plan, the Phenol/Acetone plant at Kochi unit resumed regular operations from July 2017. This has enabled HOCL to achieve net turnover of Rs.472 crore and net profit of about Rs.21 crore (Prov.) from Kochi unit operations during the FY 2018-19.

HINDUSTAN FLUOROCARBONS LTD. (HFL)

8.15 Hindustan Fluorocarbons Ltd. (HFL), a subsidiary company of Hindustan Organic Chemicals Ltd. (HOCL), was incorporated on 14.07.1983. It is located at Rudraram, District Sangareddy, Telangana. The company started production in the year 1987 and is engaged in the manufacture of Poly Tetra Fluoro Ethylene (PTFE) and of Chloro Di Fluoro Methane (CFM-22). PTFE is extensively used

in chemical, mechanical, electrical and electronic industries and has strategic applications in defence and aerospace sectors. CFM-22 is used as a refrigerant gas and also as feed stock for production of PTFE.

8.16 Authorised and paid up share capital of HFL is Rs.21 crore and Rs.19.61 crore respectively. HOCL (Promoter Company) holds 56.40% of the equity share capital and balance is held by the public (39.11%) and Andhra Pradesh Industrial Development Corporation (4.43%). HFL is listed on the Bombay Stock Exchange (BSE).

8.17 HFL started making losses from its inception in 1987-88 resulting in erosion of its net worth and reference to erstwhile BIFR in 1994. A rehabilitation package for HFL under the operating agency M/s IDBI was approved by BIFR on 03.12.2007. Total cost of rehabilitation package was Rs.19.28 crore which did not involve infusion of any Govt. funds. Following implementation of the rehabilitation package, HFL made marginal profits from 2007-08 to 2012-13. However, the company did not come out of BIFR as its net worth remained negative. HFL again suffered loss of Rs.24.82 crore in 2013-14 mainly on account of provisioning for wage revision arrears of 1997 and 2007 and reduction in sales realization. Thereafter, the company has continued to suffer losses during 2014-15 to 2017-18 mainly on account of reduction in sales realisation. Net worth of the company is also negative.

Financial Performance

8.18 Financial performance of HFL in terms of turnover and net profit/loss for the last 5 years and net worth as on 31.3.2019 are given below:

(Rs. in crore)

Year	Turnover	Net Profit / (Loss)
2013-14	31.34	(24.82)
2014-15	32.75	(3.77)
2015-16	39.63	(11.11)
2016-17	38.06	(6.33)*
2017-18	43.08	(4.82)*
2018-19	45.86	(4.78)*
	Net worth (as per Ind AS which includes revaluation of land and other assets) as on 31.3.2019: (-)Rs.36.72 crore	

* As per the new accounting standard 'Ind AS'

8.19 For revival and growth of HFL, the company had taken steps to diversify into business of fluoro specialty chemicals and adopted the strategy of switching over from single product to multi-product facility to reduce dependency on PTFE. However, due to commercial unviability of the products, mainly on account of small plant size/capacity, old technology and high overhead costs, HFL has been predominantly selling HCFC-22 directly in the market as refrigerant. Some quantity of PTFE and PTFE filled grades is also sold from time to time based on the market conditions.

8.20 The Government on 27.10.2016 has given 'in principle' approval for strategic disinvestment of HFL with the parent company HOCL to exit the firm completely. The strategic disinvestment is being processed by the Department in accordance with the guidelines / instructions issued by the Department of Investment and Public Asset Management (DIPAM) from time to time. An Inter-Ministerial Group (IMG) chaired by Secretary (C&PC) has been constituted for selection of Transaction Adviser (TA) and Legal Adviser (LA), deciding qualification criteria, preparing PIM and EoI, etc. An Evaluation Committee under chairpersonship of AS &FA, M/o Chemicals & Fertilizers, has also been constituted for fixing reserve price, making recommendations for approval of strategic partner, bid amounts etc. Transaction Adviser and Legal Adviser have also been appointed by the Department and Asset Valuer appointed by HOCL for providing advisory services and managing the strategic disinvestment process.

8.21 Advertisements for inviting EoI for strategic disinvestment of HFL were published in newspapers in April, 2018. Last date for submission of EoIs was initially 14.06.2018 which was further extended to 28.06.2018 and again to 12.07.2018. In view of only one bid/EoI received by the last date, it has been decided to terminate the strategic disinvestment process of HFL. Instead, surplus land of 66.13 acres has been put up for e-auction through MSTC. Further course of action for disposing the land is under consideration.

HIL (INDIA) Ltd.

8.22 HIL (India) Ltd., formerly known as Hindustan Insecticides Limited (HIL), was incorporated in 1954 in New Delhi for manufacturing and supply of DDT (Dichloro Diphenyl Trichloroethane) for Malaria Eradication Programme of Government of India. In the year 1957, the company set up a factory at Udyogmandal, Kerala, for manufacturing of DDT. HIL set up another factory in 1977 at Rasayani, Maharashtra, for manufacturing DDT and Malathion, an insecticide. The third manufacturing unit of the company for product formulation was set up at Bathinda, Punjab, in 2003 by shifting its erstwhile Delhi factory. Rasayani and

Udyogmandal Plants have both DDT and agrochemical manufacturing facilities while Bathinda has only formulations manufacturing and packaging facility. The company has 7 Regional Sales Offices across India and a wide network of dealers for marketing and distribution of its products.

8.23 The company acquired the new name of HIL (India) Ltd. with effect from 20.03.2018 as the old name viz. Hindustan Insecticides Ltd., was not reflecting the entire gamut of diversified business operations of the company. At the same time, the new name retains the association with its established brand name of HIL.

8.24 The authorized and paid up share capital of HIL is Rs.100 crore and Rs.91.33 crore respectively. 100% of its shares are held by the Govt. of India.

8.25 HIL is the sole supplier of DDT to the National Vector Borne Disease Control Programme (NVBDCP) of the Ministry of Health and Family Welfare, Government of India. The company diversified into agrochemicals in the late 1970s to ensure supply of quality pesticides at reasonable prices to the agricultural sector. Today it has a range of technical and formulation grade pesticides to meet the varied requirements of the farming community.

8.26 To further consolidate its position, HIL in 2012-13 ventured into seed production and marketing business. The company has been recognized as a nodal agency by the Ministry of Agriculture and Farmers Welfare for production and marketing of certified seeds for crops and vegetables. The company actively participated in seed production and supply of seed minikits high yielding varieties under National Food Security Mission (NFSM), National Mission on Oil Seeds and Oil Palms (NMOOP) and Mission on Integrated Development of Horticulture (MIDH) as National Level Seed Agency. It supplied 2.29 lakh seed minikits during 2017-18 against 1.45 lakh minikits in 2016-17. Turnover from seed business during the financial year 2017-18 was Rs.51 crore.

8.27 In order to strengthen the seed infrastructure, HIL is constructing seed godowns and setting up seed processing plant at Bhatinda unit which will be additional income avenue for the company. It has also set up a seed testing laboratory at its R&D complex, Gurugram, with financial assistance from the M/o Agriculture & Farmers Welfare, to exercise internal quality control on seeds production

8.28 In 2015-16, with a vision to become one stop shop for all the agricultural inputs needs of farmers, HIL further diversified into fertilizers trading business.

It has been inducted by the Department of Fertilizers as an agency to import fertilizers under Nutrient Based Subsidy Scheme. The company achieved a turnover of Rs.94.34 crore from supply of fertilizers during 2017-18. HIL has also started trading of bio-pesticides and bio-fertilizers.

Financial Performance

8.29 After implementation of revival package sanctioned in 2006-07, HIL has been continuously posting profits. Financial performance in terms of turnover and net profit / loss for the last 5 years and net worth as on 31.3.2019 are given below:

(Rs. in crore)

Year	Turnover	Net Profit / (Loss)
2013-14	330.35	1.84
2014-15	339.90	1.60
2015-16	334.75	1.83
2016-17	369.51	3.26
2017-18	432.66	3.41
2018-19 (Provisional)	436.00	3.75
	Net worth as on 31.3.2019: Rs.102.50 crore	

8.30 During current FY 2018-19, the company has achieved turnover of Rs.436.00 crore and net profit of Rs.3.75 crore, as per provisional unaudited results.

Exports

8.31 The company earned income of Rs.29.80 crore from export of around 438 MT of DDT to Zimbabwe, Botswana, South Africa & Namibia in 2017-18. HIL also exported agrochemicals to countries like Peru, Myanmar and Philippines earning about Rs.2.02 crore. The total exports in 2017-18 was Rs.31.82 crores as against Rs.3.43 crore in the preceding FY 2016-17. The export was around Rs.1.90 crore up to December, 2018.

New initiatives, projects and achievements of HIL

8.32 With a view to widen the product profile and reduce the company's dependence on DDT revenue, several new initiatives and projects have been taken up / planned by HIL to diversify its operations. Some of these new initiatives / projects are given below:

- After the successful commissioning of water soluble fertilizer (NPK 19:19:19) plant of 1800 MTPA at Bathinda in 2016-17 under brand name 'HILGOLD', the company has started commercial production of HILGOLD at the other two units (Rasayani and Kochi) also with capacity of 3000 MTPA each.
- HIL has signed MoUs with other public sector fertilizer companies namely National Fertilizers Limited (NFL), Rashtriya Chemicals and Fertilizers (RCF) and IFFCO for supply of neem coated UREA, DAP and NPK to HIL's business network across the country. The company has also entered into marketing tie-ups with Single Super Phosphate (SSP) manufacturers in the country for the supply of SSP to the company's business network.
- The company is in the process of setting up a Long Lasting Insecticidal Nets (LLIN) manufacturing facility at its Rasayani Unit with an initial capacity of 50 lakh nets per annum under the UNIDO's project "Development and Promotion of Non-POP alternative to DDT". The facility is expected to become operational in the second quarter of current FY 2019-20.
- With Plan loan of Rs.11 crore provided by the Govt. of India in 2014-15, HIL has successfully commissioned a plant at Kochi unit to manufacture Pendimethalin, a herbicide mainly used to control grass / weeds in agricultural and horticultural crops. The commercial production of Pendimethalin commenced in May, 2018.
- The company carried out 24 training programs in 2018-19 for farmers in about 14 states of the country on safe and judicious use of pesticides and adoption of integrated pest management practices in which around 25,500 farmers were given training. HIL also organised 200 hours of skill development training for about 355 gardeners/nursery men under Prime Minister's Kaushal Vikas Yojna.
- After the successful completion of first international training / study tour for senior officials from Government of Afghanistan on seed production, marketing, certification etc. which was funded by the World Bank (in 2016-17), another similar training for 30 Afghanistan officials was successfully conducted by HIL in October, 2017-18.
- Based on the decisions taken in the CPSE Conclave held in April, 2018, a Vision 2022 Action Plan for the company has been approved and the progress thereof is also being monitored online through DRISHTI portal of DPE.

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Chapter – 9

AUTONOMOUS INSTITUTIONS

Central Institute of Plastics Engineering & Technology (CIPET)

9.1 General Profile

9.1.1 CIPET is an ISO 9001:2015 QMS, NABL, ISO/IEC 17020 accredited premier national Institution under the administrative control of Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India fully devoted to Skill development, Technology Support, Academic & Research (STAR) activities for the growth of Polymer & allied industries in the country. CIPET has 36 functional centres spread across the country which includes 7 Institute of Plastics Technology Centres (IPT), 24 Centre for Skilling and Technical Support (CSTS) and 3 Schools for Advanced Research in Polymers (SARP).

9.1.2 Apart from the above, 5 Centres of CIPET are in process of setting up at Medak (Telangana), Jammu & Kashmir, Bihar, Varanasi (Uttar Pradesh) and Mumbai (Maharashtra). CIPET Centres have state-of-the-art infrastructural facilities in the area of Design, CAD/CAM/CAE, Tooling & Mould manufacturing, Plastics Processing, Testing and Quality Control to cater to the needs of plastics and allied industries.

9.2 Academic And Skill Development Programs

9.2.1 Long Term Professional Skill Development Programs

CIPET conducts 13 different long term training programs i.e. Diploma, Post Diploma, Post Graduate Diploma, Undergraduate, Post Graduate and Ph.D. programs with different level of entry qualifications. The long term programs offered by the institute are as follows:

- Diploma in Plastics Technology (DPT) (3 years)
- Diploma in Plastics Mould Technology (DPMT) (3 years)
- Post Diploma in Plastics Mould Design with CAD/CAM (PD-PMD)(1 ½ years)
- Post Graduate Diploma in Plastics Processing &Testing (PGD-PPT) (1 ½ years)
- B.Tech. (Plastics Engineering/Technology) (4 years)
- B.E./B.Tech. (Manufacturing Engineering/Technology) (4 years)

- M.Tech. (Plastics Engineering/Technology) (2 years)
- M.Tech. (Polymer Nanotechnology) (2 years)
- M.E. (CAD/CAM) (2 years)
- M.Sc.(Bio Polymer Science) (2 years)
- M.Sc.(Polymer Science) (2 years)
- M.Sc. (Applied polymer Science) (2 years)
- M.Sc. (Tech.) in Material Science Engineering (5 years)

The Undergraduate, Postgraduate & Doctoral programs are offered at five IPTs in affiliation/collaboration with respective State Technical Universities. In the year 2018-19, 13,674 students have been enrolled for the long term & doctoral programs. CIPET has implemented online admission process through Computer Based Test (CBT) for Diploma Programs for the academic year 2018-19.

9.2.2 Short Term Vocational Skill development Training Programs

In line with the "Skill India Mission" of Government of India, CIPET also focus on Vocational Skill Development Training Programs in the entire gamut of Plastics Engineering & Technology. In line with NSQF norms & guidelines, at present CIPET is conducting 37 approved programs in the field of Plastics Engineering & Technology. These short duration programs ranging from 16 hours upto 1 year are aimed at enhancing skill and competency level of participants in the relevant domains of plastics. The broader range of programs offered at CIPET includes:

- Employment linked sponsored skill development programs
- Up-skilling and re-skilling programs
- Short term industry specific programs
- Tailor made programs for industries
- Inplant training for students from various colleges and universities.

Majority of the skill development programs are sponsored by various State / Central Govt. departments / agencies with the objective of uplifting the living standards of unemployed / under employed youth through gainful employment in leading plastics & allied industries in India and abroad.

During the year 2018-19, CIPET trained 71,015 candidates through long term, short term and skill development programs as against 70,056 students trained during the year 2017-18.

9.3 Technology Support Services

9.3.1 CIPET is a pioneer institute in promoting the plastic industries through Technology Support Services in all the key areas viz., Design, CAD/CAM/CAE, Tooling, Plastics Processing, Testing and Quality assurance.

9.3.2 During the year 2018-19, 84,671 technical support assignments were undertaken which include job works, mould orders, testing assignments and consultancy services.

9.3.3 Inspection services also form one of the important activities of CIPET to assist various organizations including Government Departments in quality certification of plastics products. During 2018-19, 15,776 Pre-Delivery Inspection (PDI) assignments were undertaken by different CIPET centres.

9.4 Research & Development Activities

9.4.1 Two well established R&D wings of CIPET viz., (i) Advanced Research School for Technology & Product Simulation (ARSTPS) at Chennai and (ii) Laboratory for Advanced Research in Polymeric Materials (LARPM) at Bhubaneswar have been consistently contributing in applied research for industries since 2008-09.

9.4.2 Recently, Govt. of India has approved the establishment of a R&D Wing at Bengaluru – "Advanced Polymer Design & Development Research Laboratory (APDDRL)" at a total project cost of Rs. 87.00 crore to be shared equally between Government of India and Government of Karnataka. The State Government has also sanctioned the project cost for establishment of R&D Center and allotted 5 acres of land. The Centre started functioning in the temporary premises since July 2016. In addition to allotment of 5 acres of land for construction of permanent campus for APDDRL, Bengaluru, Government of Karnataka has allotted 17,760 sqft. building premises at Peenya Industrial estate for immediate establishment of R&D and Testing Laboratories. Renovation and furnishing works of laboratories were completed and the centre started functioning in the temporary premises.

9.4.3 During 2018-19, major contributions / achievements of these three R&D wings included publishing of 67 research papers, presentation of 28 papers in International Conferences and undertaking of 30 R & D projects.

9.4.4 The major Research & Developmental projects undertaken are given below:

- Development of castor oil based UV resistant coating for truck liner.
- Synthesis of end capped polyimide with high heat resistant for aerospace application.
- Development of Polyether ether ketone (PEEK) and Polyamide (PA) based 3D printing monofilament.
- Development of Foul resistant superhydrophobic coating for application in marine environment.
- Development of BOPLA film with high barrier performance.
- Development of Conductive Composite Housing.
- Recycling and value addition of waste electrical and electronic equipment (WEEE).
- Product Improvement for floater system for installation of solar PV Panels, NETRA, NTPC Ltd., New Delhi.
- Development of Indigenous Floating System for Installation of Solar PV Panels in Water bodies, SERI-DST, New Delhi.
- Translational Research on Biomaterials for orthopedic and Dental Application, DBT, New Delhi.
- Reverse engineering of material and Product, M/s Varroc Polymers Pvt. Ltd.
- Design and Development of Main assembly of Sonobouy, M/s Keltron, Kerala.
- Developmental study on O-ring rubber Material used in vehicle chains, M/s. Tubes investments India, Chennai.
- Development of outer case assembly for Sonobouy, M/s NPOL, Kochi.

9.5 Financial Performance (Un-Audited)

9.5.1 During the financial year 2018-19, CIPET has generated an income of Rs. 335.00 crore against the budgeted annual income of Rs. 307.23 crore. During the same period, CIPET has incurred a revenue expenditure of Rs. 260.83 crore against the budgeted annual revenue expenditure of Rs. 234.41 crore in 2017-18.

9.5.2 During the last few years, CIPET's civil & technical infrastructure facilities have been strengthened which has culminated in ensuring consistent growth in all the domains of plastics engineering & technology viz., Academic, Technology and Research & Development. CIPET has been operating on self-sustainable mode since 2008-09 onwards.

9.6 Major Events

9.6.1 Inauguration of CIPET: Centre for Skilling & Technical Support (CSTS) & Foundation Stone Laying ceremony of New CIPET Building at Doiwala, Dehradun were held jointly by Late Shri Ananth Kumar, the then Hon'ble Minister for Chemicals & Fertilizers and Parliamentary Affairs, Government of India and Shri Trivendra Singh Rawat, Hon'ble Chief Minister, Uttarakhand on 10th July, 2018.

9.6.2 CIPET: Centre for Skilling and Technical Support (CSTS), Chandrapur – The Foundation Stone Laying Ceremony was held on 11th November, 2018 jointly by Shri Nitin Gadkari, Minister for Road Transport and Highways, Shipping & Water Resources, River Development and Ganga Rejuvenation, Government of India and Shri Hansraj G. Ahir, Minister of State for Home Affairs, Government of India.

9.6.3 Golden Jubilee Celebration of CIPET

CIPET has successfully accomplished 50 years of dedicated services to the Nation and particularly for plastics and its allied industries. Considering its long journey with many milestones achieved in terms of establishment of new CIPET centres as well as growth and sustainable development of plastics industries, the celebration in commemoration of Golden Jubilee in CIPET was held on 24.01.2019 at Chennai. The event was inaugurated by Shri M.Venkaiah Naidu, Hon'ble Vice President of India. The Guests of Honour included Shri Banwarilal Purohit, Hon'ble Governor, Tamil Nadu; Shri D.V. Sadananda Gowda, Hon'ble Minister of Statistics & Programme Implementation and Chemicals & Fertilizers, Govt. of India; Thiru D. Jaya Kumar, Hon'ble Minister of Fisheries, personnel and administrative Reforms, Govt. of Tamil Nadu, Dr. J. Jayavardhan, Hon'ble Member of Parliament, Chennai South Constituency and Shri Ma. Subramanian, Hon'ble Member of the Legislative Assembly, Saidapet Constituency. The event was also marked the release of commemorative postage stamp of CIPET.

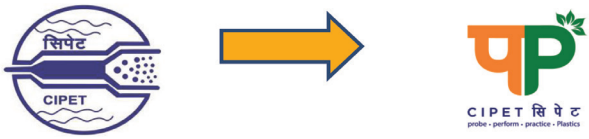
- The "Largest Human Recycling Logo" consisting of 3,373 people was achieved by CIPET in commemoration of the Golden Jubilee Celebrations of CIPET in Chennai on 23rd January 2019 with an objective to create awareness for using biodegradable plastics and reusing plastics in general. The Asia Books of Record has issued

certificate on the spot by recognizing the CIPET's initiatives and the Guinness World Records Assessment Team awarded the Certificate to CIPET for its achievement.

- Hon'ble Minister of State for Road Transport & Highways, Shipping and Chemicals & Fertilizers, Shri Mansukh L. Mandaviya participated in the 50th year Golden Jubilee Celebrations conducted on 16.02.2018 at CIPET, Chennai

9.6.4 Redesigning of CIPET logo:

- The existing logo of CIPET has been redesigned and launched in-line with the present activities, programs and vision of CIPET.



9.6.5 Signing of MoU:

- CIPET has signed a Memorandum of Understanding (MoU) with University of Massachusetts, USA on 22.03.2019 for cooperation in research collaborations and student and faculty exchanges.

9.7 Conferences / Seminars / Exhibitions

9.7.1 International Conference on Advancements in Polymeric Materials (APM) 2019, the 10th in the series, with the theme of "Innovation in Polymeric Product Development and Manufacturing", was organized by CIPET: School for Advanced Research in Polymers (SARP) - Advanced Research School for Technology and Product Simulation (ARSTPS), at CIPET: Institute of Plastics Technology (IPT), Chennai during 22-24 January, 2019. The International Conference of APM-2019 was inaugurated by Prof. M.K. Surappa, Vice-Chancellor, Anna University, Chennai along with Prof. (Dr.) S.K. Nayak, Director General, CIPET, and Shri D.Praveen, Director, DCPC, MoC&F. About 98 Universities/Institutions/R&D laboratories including 12 international universities have participated in the conference. 202 Research papers in different topics of relevance were presented and deliberated during the conference which included a dedicated poster session.

9.7.2 World Environment Day 2018 Exhibition was held at New Delhi during 2-5 June, 2018. The CIPET stall was inaugurated by Shri P. Raghavendra Rao, Secretary, DCPC, Ministry of Chemicals & Fertilizers, Government of India.

9.8 Swachh Bharat Abhiyan

9.8.1 CIPET, Head Office and its centres are organizing Swachh Bharat Abhiyan activities on monthly basis. The students and staff members are enthusiastically participating in cleanliness activities such as cleaning of institute premises, hostel premises, shop floor area, class rooms and surrounding areas highlighting the importance of hygiene and cleanliness.

9.9 Implementation of Official Language – Hindi

9.9.1 Late Shri Ananth Kumar, Hon'ble Minister for Chemicals & Fertilizers and Parliamentary Affairs, Government of India presented "Rajbhasha Gold Shield" to CIPET in the Hindi Salahkar Samiti Meeting organized at New Delhi on 16.07.2018 for excellent performance in Official Language Implementation for the year 2016-17.

9.9.2 Hindi Diwas and Hindi Pakhwada

As a part of implementation of Official Language Policy and as per the directives of Department of Official Language, "Hindi Fortnight" was organized at all CIPET centres from 14th September (Hindi Day). During the occasion, several competitions in Hindi viz., Vocabulary, Quiz, Debate, Essay Writing, Slogan Writing, Reading and Speech were organized for all Officers / Employees / Students of CIPET centres.

9.9.3 Rajbhasha Inspection by Ministry

Rajbhasha Inspection of CIPET Centres was undertaken by Department of Chemicals & Petrochemicals on 29.01.2018, 06.04.2018 and 21.06.2018.

Institute of Pesticide Formulation Technology (IPFT)

9.10 Introduction

Institute of Pesticide Formulation Technology (IPFT) located at Gurgaon, Haryana, is a registered Society under the Societies Registration Act - 1860 under the Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India. IPFT is the only Institute of its kind devoted to the development of state-of-the-art user and environment friendly new generation pesticide formulation technology. The Institute has established a healthy rapport with the Indian agrochemical industries and has been able to successfully transfer technologies for safer, efficient and

environment friendly formulations. IPFT is also helping the industries in data generation as per CIB/RC guidelines for bioefficacy, phytotoxicity and pesticide residue analysis for both agriculture and house hold formulations. IPFT undertakes both in-house and external funded R & D projects.

9.11 Objectives of the Institute

- Development and production of the state-of-the-art user and environment friendly new generation pesticide formulation technology.
- Promotion of efficient application technologies suiting the existing requirements of the newer formulations.
- Information dissemination of safe manufacturing practices, quality assurances, raw material specification and sources.
- Analytical and consultancy services.
- Fostering the improvement in the qualification and usefulness of pesticide scientists working in the agrochemical area.
- Continuing education through specialized training for pesticide personnel.

9.12 Purpose to Setup

9.12.1 Pesticides in pure chemical form (technical grade) cannot be applied directly because of very high toxicity and complex physico-chemical properties. The technical grade pesticides are converted into a ready to use state (formulation), in which they can be diluted with water and small quantity may be homogeneously distributed over large target area. The formulated products are suitably applied by practical methods to produce desired efficacy on the target pests.

9.12.2 To minimize the risks and disadvantages of conventional formulations, IPFT was set-up to develop various user & environment friendly new generation pesticide formulations and related activities for safety of user, farmers and environment. IPFT is the only Institute of its kind in the country for helping the Indian Agrochemical Industries in the field of pesticide formulations development.

9.13 Major Achievements

Research & Development

9.13.1 Development and Promotion of Non-POPs alternatives to DDT -The objective is to introduce bio- and botanical pesticides and locally appropriate cost-

effective and sustainable alternatives to DDT as first step for reduction and eventual elimination of dependency on DDT, ensuring food safety, enhancing livelihood and protecting human health and environment. The composition and process of Neem based spreading oil, suspension concentrate formulations at lab scale have been optimized. The layout and design of Pilot plant equipment for scale up of the process has been standardized for producing these formulations at pilot scale.

9.13.2 Advanced and Environmentally Safe Pesticide Formulation Development for Mosquito Control - The aim of the project is development of formulations for the control of mosquito larva also and adult mosquito control. Research is going on for exploring the possibility of attractant types of formulations and its possible botanical alternates. Formulations were developed to control mosquito at its different stages of life cycle like larva, pupa and adult. The Institute developed Neem - based water dispersible granules formulation to control larvae and adult misquotes. The developed formulation qualified all quality control specifications and provided good bio efficacy against mosquitoes.

9.13.3 Promotion of Neem Based Modified Compositions as an Effective Crop Pest Management Tool - The main objective of the project is to promote neem as a safe alternate to synthetic chemical pesticide for crop pest management its bio-efficacy studies on the synergistic insecticidal compositions and development of its powder formulations for development of control of the soil pest as well as for whitefly. Botanical synergist based formulations developed for agricultural crop pest management and the bio-efficacy of the formulations is enhanced by using botanical based synergist. Experiments are being conducted for the bio-efficacy evaluation of developed formulations.

9.13.4 Reduction of Synthetic Chemical Pesticide Doses with the Use of Botanical Adjuvants - The composition of adjuvants have been optimised for dose reduction and bio-efficacy enhancement of synthetic pesticides for the control of pests in agricultural crops. Further Research and Experiments are under progress for the same.

9.13.5 Development of Acetamiprid 19.5 %+ Emamectin Benzoate 4 % Water Soluble Granules formulation – This is a combination formulation of Acetamiprid and Emamectin Benzoate. This new formulation will provide broad spectrum bio-efficacy against various types of insects in different agricultural crops. The composition and process of the formulation has been optimized and the analysis of physio-chemical parameters was conducted. The technology is transferred to M/s. NISSO Limited.

9.13.6 Extraction of Bioactive Compounds & Development of Pesticide Formulations from Aromatic Plants Available in North Eastern Region of India, their Quality Parameters & Employment Generation - In this project collaboration with Department of Chemistry, Manipur Central University was approved and sanctioned under Twining programme 2017-18 of Department of Bio Technology, New Delhi. The main objective of the project is to develop environment friendly formulations like micro-emulsion concentrated emulsion, gel, cream from aromatic plant extracts in North Eastern Region of India. Research work will concentrate to develop green pesticide formulations from these plants which will reduce the load of chemical insecticides.

9.13.7 Residue & Persistence study of Fipronil 4% + Acetamiprid 4% SC on Chilli, Okra & Tomato. The project is sponsored by M/s. Parijat Indutries Limited, New Delhi.

9.13.8 Residue studies of fruits, vegetables, cereals & seed spices, oil seeds grown in different parts of Rajasthan".

9.13.9 Method development of fipronil + Acetamiprid by GCMS/LCMSMS.

9.13.10 Bio efficacy data generation- The new combination formulations viz. Emamectin benzoate 3.5% +Lambda cyhalothrin 5%WP, Thiodicarb 50%W.P+ imidacloprid 5% WDG, Thiophenate methyl 15% +COC 40% WP, Indoxacarb 9% + Emamectin benzoate 1% SC will be evaluated against major insect pest and viz. fruit borer, thrips and mites and diseases viz. blight and leaf spots of the field crops like Tomato and Chilli.

9.14 In house Research & Development

Progress /achievements

9.14.1 The composition and process of Neem based Mosquito coil and repellent cream formulations at lab scale have been optimized. The layout and design of Pilot plant equipment for scale up of the process has been standardized for producing these formulations at pilot scale.

9.14.2 Formulations have been developed to control mosquito at its different stages of life cycle like larva, pupa and adult. These formulations include smoke coils, repellent cream and spreading formulations. The repellent

cream and mosquito coils were developed to control adult mosquitoes and spreading oil formulation for larvae control. Further efforts were made to develop pesticides free mosquito gel trap formulation for the control of adult mosquitoes.

9.14.3 Extensive studies were conducted to identify a plant-based material, which enhance activity of neembased pesticide. The material was used in different type of formulation for agricultural crop pest management.

9.14.4 The synergist was identified and tried for reduction of pesticide doses in agricultural crop pest management. The reduction of pesticide doses could be achieved up to 30% using the identified synergist. Initial trial was conducted on tomato crop

9.14.5 Studies on the residue of chlorothalonil 75% wp in/on groundnut -Sponsored by M/s Krishi Rasayan Exports Pvt. Ltd.

9.14.6 Studies on Persistence of RJKP 1505 (2, 4-D dimethylamine salt 58% WSC IN/On Sugarcane Plant - Sponsored by M/s. ATUL Limited, Mumbai.

9.14.7 Studies on Multilocation Harvest Residue of RJKP 1505 (2, 4-D Dimethylamine Salt 58%Wsc In/On Sugarcane And Cropped Soil - Sponsored by M/s. ATUL Limited, Mumbai.

9.14.8 Studies On Persistence of RJKP 1505 (2, 4-D dimethylamine salt 58% WSC Insoil Of Four Different Locations - Sponsored by M/s. ATUL Limited, Mumbai.

9.14.9 Studies On Persistence of RJKP 1505 (2, 4-D dimethylamine salt 58% WSC In Buffered water - Sponsored by M/s. ATUL Limited, Mumbai.

9.14.10 Studies On the Persistence OF Gibberellic Acid 0.45% SL In/On Chilli - Sponsored by M/s Krishi Rasayan Exports Pvt. Ltd.

9.14.11 Studies on the Residues oF Gibberellic Acid 0.45% SL In/On Chilli. -Sponsored by M/s Krishi Rasayan Exports Pvt. Ltd.

9.14.12 Studies on the Residue of Imazamox 35% + Imazathapyr 35% Wg In/On Soybean - Sponsored by M/s Parijat Industries (India) Pvt. Ltd.

9.14.13 Residue studies of Tricyclazole 75% WP in Paddy (Grain, Straw, Soil).

9.14.14 Field evaluation of Tribasic Copper Sulfate 34.5 % SC in cucumber and Chilli.

9.14.15 Efficacy and phytotoxicity of WCPL STSL against sucking pests.

9.14.16 Bio-efficacy evaluation of Metarhizium 1.15 % WP against major pests of chickpea crop.

9.14.17 Bio-efficacy and Phytotoxicity studies of Beaveria bassiana.

9.14.18 Bio-efficacy and phytotoxicity of Copper hydroxide 53.8% DF against late blight of potato.

9.14.19 Monitoring of Pesticide Residues in Vegetables of different parts of India sponsored by Ministry of Agriculture – Every month approximately 60 samples of fruits, vegetables (farm gate, organic & mandi), cereals, milk & water were collected from Faridabad, Rohtak & Palwal – three districts of Haryana. Samples were processed & analysed by sophisticated instruments like GC (ECD), GC(FPD) & GC-MS. Analysis data were compiled & the reports were sent to project co-ordinator by second week of every month. More than 90% of the samples are found without pesticide residue. Approx 7.0% of the samples are found with pesticide residues while about 2.0 % of them are found with pesticide above MRL.

9.15 Continuation of NABL Accreditation of IPFT

9.15.1 IPFT continues to be a Laboratory accredited by the National Accreditation Board for Testing & Calibration Laboratories (NABL) as per ISO/IEC–17025 (2005) for the analysis of pesticides and their formulations, pesticide residues in food matrices and CWC related chemicals. The Re-assessment of the laboratory was held during March 25-26, 2017 and the accreditation of the Lab is valid until 23.04.2019.

9.15.2 The laboratory is recognized by the Bureau of Indian Standards (BIS) as per Lab Recognition Scheme for the testing of pesticide formulations.

9.16 Programmme Study Centre for "Post Graduate Diploma in Analytical Chemistry (PGDAC)"

9.16.1 IPFT continued to be an IGNOU Programmme Study Centre for "Post Graduate Diploma in Analytical Chemistry (PGDAC)" for 2018–19.

9.17 Governing Body Meeting

9.17.1 The 37th Meeting of the Governing Body of IPFT under the Chairmanship of Secretary DC & PC, Ministry of Chemicals & Fertilizers, New Delhi was held on 9th August, 2018.

9.18 Tranning Activities

9.18.1 IPFT is conducting training courses for various stakeholders in chemical/ agrochemical sector. Some of the courses offered at IPFT are:

Basic Techniques of Pesticide Formulations; QA/QC of pesticides and their formulations; pesticide application technology; pesticide residue analysis; basic principles of GC, HPLC, GC-MS, GC-MS/MS, LC-MS/MS; Advanced Training on GC, HPLC, GC-MS, GC-MS/MS, LC-MS/MS, Biotech application in biological pesticides, laboratory and field evaluation of new molecules and pesticides for agriculture and public health sectors; and integrated pest management. IPFT contributes towards farmers field fays and farmers meetings with significant impact under development of rural agriculture and intensive crop management. Research scholars/ students/ executives from Indian universities/ pesticide industries come to IPFT for taking training on above areas. Recently Scientists from Nepal took training on "Development of Neem based formulations for agricultural and public heath applications" during 17th -19th August, 2017.

9.19 Specialized Training prgrammes for Industry personnel /students

9.19.1 During the year IPFT conducted 9 specialized training programmes on formulation, analytical techniques, basic principles of GC, HPLC, GC-MS, LC-MSMS to the universities students and Indian industry personnel.

9.19.2 60 days Residential Training Programme under ACABC - During the year 2017-18 IPFT was recognized as Nodal Training Institute by MANAGE, Hyderabad for 60 days residential training programme to the unemployed agricultural youths of India under ACACB Scheme sponsored by Ministry of Agriculture & Farmers Welfare, New Delhi. First such training programme was successfully organized during January – March, 2018, wherein 18 candidates were trained.

9.19.3 Specialized Training prgrammes to Foreign Nationals - During the year 2017-18 IPFT conducted specialized training progremms on formulation

developments to 04 foreign nationals from Agriculture Department, NEPAL.

9.19.4 Specialized Training Programme at VERIFIN Laboratory, Finland - During the year 2017-18 IPFT Scientist Sh. Mukesh Kumar Singh was selected for six months specialized training programme on Analytical Chemistry Skill Development at VERIFIN Laboratory, Finland under sponsorship of OPCW, The Hague.

9.20 Consultancy Services

9.20.1 IPFT has been offering Consultancy Services to various Agrochemical Industries from time to time on various aspects related to Pesticide Manufacturing and Establishment of QA/QC Laboratories. During the year IPFT provided consultancy to the following Indian and international companies.

1. Provided consultancy services to M/S Entovest, Turkey.
2. Gharda Chemicals Ltd., Mumbai.

9.21 Awareness And Extension Activities

9.21.1 IPFT has been creating awareness and conducting extension activities for farmers through the following activities:

- Identifying and adopting villages for educating the farmers in Pesticide Application Technologies.
- Conducting survey and obtaining feedback on latest pests problems.
- Educating farmers about organic farming and propagating the use of indigenous techniques/ traditional knowledge.
- Conducting workshops for judicious use of pesticide through Krishi Vigyan Kendras (KVKs).
- Participation in various Krishi Melas, Conferences, Agriculture Exhibitions etc.

9.22 Rajbhasha Activities

- Bilingual Covering letters were used with the letter of technical and scientific nature. Formats of Bills/ Test reports were prepared in bilingual form.
- IPFT have its own bilingual website.
- Annual report 2016-17 was printed bilingually.

- IPFT is a member of Town Official Implementation Committee (TOLIC), Gurgaon.
- The letters received in Hindi were replied in Hindi only.
- Codes, Manuals, Forms, Procedural literature are in bilingual form.
- IPFT employee Mr. Sudeep Mishra, Scientist (Analytical) participated and won second prize in Hindi essay competition organised by TOLIC on 30.01.2017.

9.23 Swach Bharat Mission

9.23.1 Swachhta Pakhwada was observed from 1st September, 2018 to 15th September, 2018 at Institute of Pesticide Formulation Technology (IPFT), Gurugram and the following activities were carried out during the Swachhta Pakhwada.

- Under "Swachh Bharat Mission", every month following activities conducted in IPFT during 2018-19(upto November, 2018) :

  (a) Daily Cleaning of Admin Block
  (b) Daily Cleaning of Laboratory Building
  (c) Daily Cleaning of washrooms and urinals
  (d) Daily Cleaning of lawns and approach roads
  (e) Cleaning of water storage tanks on monthly basis.
  (f) Cleaning of roads of nearby areas i.e. on NH-8, Udyog Vihar etc.

- Mass Pledges was administered to employees.
- Director, IPFT along with Senior Officials planted trees in IPFT premises.
- T-Shirt with printed Swachhta Message was distributed to the employees.
- All employees participated in the identification of old records/files for weeding out in their division. Old materials/items were identified to be disposed off as a scrap.
- Observance of Cleanliness Drive (Fortnight) – from 01-09-2018 to 15-09-2018.

9.24 Promotional Activity For Swach Bharat

9.24.1 Essay Competition was organized, wherein the employees of IPFT and the Project Employees were required to write the essay. The Cash Award was given to the selected participants on the concluding day of the Pakwada.

Shri P. Raghavendra Rao, Secretary (C&PC)'s visit to IPFT Laboratories and Pilot Plant on 26-03-2018

Director, IPFT along with Senior Officials were planted trees in IPFT premises on 04th September, 2018

Cleaning activity within the Campus during 4-7 September, 2018.

Director, IPFT and all employees participated in Shramdaan in campus and surrounding areas on 14th September, 2018

Mass appeal by Dr. Kuldeep Sharma, Former Director (DKMA) on 14th September, 2018.

Chapter-10

PROMOTIONAL ACTIVITIES AND MAJOR EVENTS

INDIA CHEM 2018

10.1 To promote the Indian Chemicals and Petrochemicals Industry, Department of Chemicals and Petrochemicals in collaboration with FICCI have been organizing the "India Chem" event biennially since 2000. These events provide a platform to the Indian Chemical and Petrochemical Industry to showcase its potential to an international audience.

10.2 The 10th edition of India Chem 2018 was held during 04th - 06th October, 2018 at Mumbai with the theme "Chemicals and Petrochemicals- Advantage India". On 04th October, 2018, Shri Nitin Gadkari, Hon'ble Minister of Road Transport and Highways inaugurated the function. Captains of Industry from Chemicals and Petrochemical sectors attended the conference. In his inaugural address, the Hon'ble Minister urged the Chemicals and Petrochemicals Industry to look at ways to promote import substitution and conveyed the Global investors that there is a huge potential in Indian Petrochemical sectors to invest.

Shri Nitin Gadkari, Hon'ble Minister of Road Transport and Highways inaugurating India Chem 2018 on 04/10/2018 at Mumbai

10.3 Shri Yousef Al-Benyan, Vice Chairman and CEO, SABIC in his International Keynote Address mentioned that India and Saudi Arabia are the nations on the move. This Forum has given an opportunity to forge further relationships in the chemical and petrochemical industry. Shri Nikhil Meswani, Executive

Director, Reliance Industries Ltd in his Indian Keynote Address mentioned that Indian chemical and petrochemical industry is in an interesting phase, as India poses dynamic growth opportunities.

10.4 Highlights of India Chem 2018

- Participation from 24 leading countries namely Argentina, Bangladesh, Belgium, Brazil, Chile, China, Dubai, Germany, Iran, Israel, Kuwait, Malaysia, Portugal, Qatar, Saudi Arabia, Singapore, South Korea, Taiwan, Trinidad & Tobago, Turkey, United Kingdom, USA, Vietnam and Japan;
- States Participation: Maharashtra, Rajasthan, Madhya Pradesh, Chhattisgarh and Jharkhand;
- 285 exhibiting companies (International-147, National-138);
- More than 60 esteemed speakers from manufacturing, end users and intermediates segments;
- Above 200 delegates attended the Conferences;
- A Knowledge report released on Indian Chemicals & Petrochemicals Industry,
- FICCI Chemicals and Petrochemicals Awards 2018 were distributed with 27 award categories.
- 16,162 Business visitors from various countries

10.5 Concurrent events held as part of India Chem 2018

- Global CEOs Round Table
- Conclave with Overseas Industry Associations coinciding India Chem 2018 organized by Indian Chemical Council
- INDIA – JAPAN Chemicals & Petrochemicals forum, supported by Japan External Trade organization (JETRO)
- INDIA – GERMANY Chemicals & Petrochemicals forum, supported by Indo-German Chamber of Commerce (IGCC)
- FICCI Chemicals & Petrochemicals Awards Distribution Function
- Buyer Seller Meet by CHEMEXCIL
- Conclave on Indian Petrochemical Industry
- Conclave on Process, Plant Machinery, Pumps & Valves
- Conclave on Agrochemical Industry

10.6. India Chem 2020

The 11th edition of India Chem 2020, would be organized during the month of October, 2020 at Bombay Exhibition Centre, Mumbai jointly by the Department of Chemicals and Petrochemicals and FICCI.

Chapter – 11

GENERAL ADMINISTRATION

ORGANISATIONAL SET UP OF THE DEPARTMENT

11.1 The main activities of the Department are policy making, sectoral planning, promotion and development of chemical and petrochemical industries. The administrative and managerial oversight of Public Sector Undertakings engaged in the manufacture of various chemicals and petrochemicals, as well as Autonomous Bodies engaged in these sectors are some of the other major functions of the Department.

11.2 The Department is headed by a Secretary to the Government of India who is assisted by an Additional Secretary & Financial Adviser, two Joint Secretaries, one Deputy Director General, one Economic Adviser and one Chief Controller of Accounts (Organisation chart at Annexure IV).

Employment of Scheduled Castes/ Scheduled Tribes/ Physically Handicapped in the Main Secretariat of the Department

11.3 The status of employment of Scheduled Castes/Scheduled Tribes/Physically handicapped in the main Secretariat of the Department, as on 31.03.2019 is as under:-

Group	Total No. of posts	Scheduled Castes	Scheduled Tribes	Physically Handicapped
A	36	6	1	0
B	75	12	1	0
C	77	13	3	1
TOTAL	188	31	5	1

11.4 Officers in Group 'A' include officers on deputation from All India Services, Central Services, officers belonging to Central Secretariat Service and Technical posts of the Department. Placements in posts of Group B and C is done on the basis of nominations made by the Department of Personnel & Training, Department of Official Language and Ministry of Statistics & Programme Implementation.

Record Management

11.5 The Parliament has enacted "The Public Records Act, 1993" to regulate the management, administration and preservation of public records of the Central Government. The Central Government has also made rules to carry out the provisions of the Act. In terms of the provisions contained in Section 6(1) of the Act, the Under Secretary in-charge of General Administration has been nominated as Records Officer in the Department. A modernized Record Room of the Department is located in Udyog Bhawan.

Use of Hindi in Official Work

11.6 To ensure compliance with the statutory provisions and Presidential Orders on the Official Language Policy of the Union in the Department and in its' attached and subordinate offices, there is a Hindi Section in the Department. During the year 2018-19, till 10 December, 2018 under the overall guidance of Senior Economic Advisor and thereafter under the guidance of Deputy Director General, the work of Hindi Section was supervised by Assistant Director (OL).

11.7 Hindi Pakhwada was organized in the Department from 15th to 30th September, 2018. During the Pakhwada, five competitions of Hindi Essay Writing, Noting and Drafting, Translation, Hindi Poetry and Hindi Essay Writing exclusively for MTSs were held.

11.8 Hindi Advisory Committee meeting was held on 16.07.2018 in New Delhi under the chairmanship of Hon'ble Union minister of Chemicals & Fertilizers. Secretary (Chemical and Petrochemical) & Senior Economic Advisor from the Department participated in this meeting. Official Language awards for excellent work in Implementation of official Language were given to HIL, CIPET & HOCL.

11.9 Two meetings of the Departmental Official Language Implementation Committee were held under the Chairpersonship of Senior Economic Advisor on 29.06.2018 & 25.09.2018. One meeting of the Departmental Official Language Implementation Committee was held under the Chairmanship of Shri R.K. Kamra, Dy. Director General on 27.12.2018. The progress made in the use of Hindi in the Department was reviewed in these meetings and suggestions for further improvement were adopted for implementation.

11.10 To promote the use of Hindi in the Department, two incentive award schemes, approved by Department of Official Language, namely: (1) Original Noting/ Drafting in Hindi & (2) Dictation in Hindi have been implemented. Apart from this, order by name has also been issued by Secretary to all the Officers/ Officials proficient in Hindi to do their official work in Hindi.

11.11 During the year 2018-19, the First Sub Committee of Parliament on Official Language inspected Central Institute of Plastics Engineering and Technology (CIPET), Lucknow on 02.05.2018, IPFT, Gurugram on 06.06.2018. CIPET, Chennai on 08.10.2018 & CIPET, Bhubaneshwar on 30.10.2018 and IPFT, Gurugram on 23.02.2019.

In the same sequence Official language related inspection by the Department was carried out of CIPET, Kochi on 06.04.2018, HIL, Udyogmandal on 07.04.2018, IPFT, Gurugram on 21.05.2018, CIPET HQ, Chennai on 21.06.2018, CIPET, Ahemdabad on 01.10.2018, HIL (India) Ltd. on 20.02.2019 and HOCL, Kochi on 28.02. 2019. Similarly, Official language related inspection of all the Sections of the Department was carried out by the Hindi Section during the month of Sep-Oct, 2018 & suggestions were given to the Officers/Officials present during the inspections for increasing the use of Hindi in the Department & also to overcome the difficulties being faced by them in use of Hindi.

11.12 Two Hindi workshops were organised in the department on 28.06.2018 & 21.08.2018. The subject of both of the workshop was "Official Language policy & its implementation". 47 Officers/Officials were provided information on different provisions related to Official Language in these workshops.

Senior Economic Advisor represented the Department in the 11th World Hindi Conference held during 18 to 20 August, 2018 in Mauritius, in which besides dignitaries from the political world, dignitaries from Hindi world were also present.

11.13 Most of the documents like Annual Report, Performance Budget, Demand-for-Grants, Parliament Questions & Assurances, Papers of Department related Parliamentary Standing Committee & report of Controller and Auditor General, Cabinet notes, papers of updating the departmental website were issued in bilingual form as per the Section 3(3) of the Official Language Act, 1963. All letters received in Hindi were replied to in Hindi as per the Rule 5 of the Official Language Rules, 1976. Efforts were made to progressively increase the use of Hindi in day-to-day official work as set out in the Annual Programme of the Department of Official Language.

11.14 During the year, Quarterly Progress Reports were compiled on the basis of the inputs received from different Sections of the Department and were sent to the Department of Official Language for inclusion in their database. Reports received from Attached and Subordinate Offices were reviewed and deficiencies found therein were suggested for rectification.

Activities of the Vigilance Set up

11.15 The Department has a part-time Chief Vigilance Officer (CVO) of the rank of Joint Secretary to look into the complaints against the employees of the Department as well as Board Level Officers of the Public Sector Undertakings (PSUs) and organizations under its administrative control. The CVO is assisted by a Director, Under Secretary and a Vigilance Section.

11.16 'Vigilance Awareness Week' was organized during the period 29th October, 2018 to 3rd November, 2018 with the theme "Eradicate Corruption- Build a New India". All the PSUs and Autonomous Organizations under the administrative control of the Department also organized 'Vigilance Awareness Week'. Integrity Pledge was also taken by officers/officials of this Department as well as PSUs/ Autonomous Organizations under the administrative control of this Department on 29th October, 2018.

Gender Equality

11.17 In compliance of The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 the Department has constituted an Internal Complaints Committee for redressal of complaints relating to sexual harassment of women. The Committee is functional since June 2002. The present Committee is headed by the Joint Secretary (Petrochemicals). Based upon suggestions made by members in the meeting of the Committee held on 17th September, 2018, following activities were undertaken:

i. Constitution of the ICC on Sexual Harassment of Women at Workplace was uploaded on the website of the department.
ii. Complaints box was put for the convenience of women employees.

Rights of Persons With Disabilities

11.18 The Rights of Persons with Disabilities Act, 2016 aims to uphold the dignity of every person in the society and prevent any kind of discrimination. It speaks about the acceptance of people with any kind of disability and to ensure full participation of such persons and their inclusion in society. Efforts are made by the Department to fill up posts suitable for persons with disabilities as per guidelines of Ministry of Social Justice & Empowerment.

11.19 All efforts are made that persons with disabilities have easy access to the physical environment and other facilities and services. The Information and Facilitation Centre of the Department has been set up specifically on the ground floor in Shastri Bhawan enabling easy and obstacle free accessibility for such persons. Senior officers of the Department are available to attend to the problems of persons with disabilities.

11.20 Department of Chemicals & Petrochemicals is the cadre controlling authority in respect of 06 Technical posts in Group 'A', 5 posts of Staff Car Driver, 2 posts of Sr. Gestetnor Operator, 1 post of Dispatch Rider and 48 posts of Multi-Tasking Staff (MTS) in Group 'C'.

Observance of 'Swachhata Pakhwada' in the Department

11.21 Department of Chemicals and Petrochemicals observed Swachhta Pakhwada from 1st September to 15th September, 2018. During the Swachhta Pakhwada 2018, the Department undertook various activities such as displaying banners, special cleanliness drive, removing / weeding out of old files / records, installation of dustbins and sanitary napkin incinerators.

Hon'ble Minister of State (C&F), Sh. Rao Inderjit Singh leading the cleanliness drive at the Murthal Centre of CIPET.

11.22 Secretary administered 'Anti Littering' Pledge to officers of the department on 5th September 2018 as a part of its Swachhta Pakhwada.

11.23 Department of Chemicals & Petrochemicals has observed Swachhata Pakhwada from 1st September 2018 to 15th September 2018. During observation of Swachhta Pakhwada 2018, Department launched a pledge on anti-littering and 3 competitions on MyGov Portal – slogan writing, paragraph writing and crowd sourcing of innovative ideas. Cash prizes were awarded to the best entries in respective categories. Two other activities observed during the Pakhwada activities were Essay Writing Competition and Poetry Recital Competition on the subject "Lack of hygiene – invitation to disease" (यहां गंद्गी अर्थात बीमारी को निमंत्रण) & "Let us move towards swachhata" (आओ चलें स्वच्छता की ओर) respectively in both English and Hindi. A workshop on "Plastics: Positive Attributes & Management" was also organised by the Department at CSTS, CIPET centre at Murthal on 19th September, 2018.

11.24 Ministry of Drinking Water and Sanitation has awarded 2nd prize to Department of Chemicals and Petrochemicals and presented a shield – SWACHHATA PAKHWADA AWARD-2019 for outstanding contribution of the Department for undertaking various Swachhata Activities during Swachhata Pakhwada.

11.25 During the observance of Pakhwada, the department organized a "Talk by eminent person/resource person on Swachhta". Shri Mir Ranjan Negi, Former Indian Hockey Player and Hockey Coach, was invited to deliver a talk to the officials and staff members of the department on the "Importance of Swachhta for Sportspersons for their healthier performance". The talk was well attended and highly appreciated.

Observance of 'Swachhata Pakhwada' in PSUs / ABs.

11.26 During the 'Swachhata Pakhwada, the PSUs / Autonomous Bodies under the administrative control of the Department undertook activities like cleaning of office complexes / factories / labs / toilets / premises, installations of sanitary napkin vending machines and sanitary napkin incinerators, organizing swachhata awareness programmes, essay writing, drawing. cartoon and quiz competitions / workshops in schools, conducting rallies, distribution of pamphlets, displaying banners and posters on cleanliness, talks on swachhata etc.

Swachhata Hi Seva Campaign

11.27 Department as well as PSUs / ABs under its administrative control actively participated in "Swachhata Hi Seva" campaign with the aim to make it a janandolan for realizing the vision of a clean India. Minister of State (C&F) Shri Rao Inderjit Singh undertook shramdaan for Swachhata with the officials and the staff members of the Department of Chemicals and Petrochemicals and its PSUs / ABs on 19.09.2018 at the Centre for Skilling & Technical Support (CSTS) of CIPET at Murthal. Activities such as cleaning of office complexes, parks, public places, hostels, toilets, waste collection drives and awareness campaign and planting of saplings were included in Shramdaan.

MyGov Initiatives of the Department

11.28 MyGov is Government of India's citizen engagement platform which aims to promote active citizen participation in the India's governance and development. MyGov is designed to facilitate engagement between the Government and citizens using a range of methodologies. It was launched on 26th July, 2014 by Hon'ble Prime Minister.

11.29 The Department launched two competition through MyGov on 27.07.2018 viz., (i) Paragraph writing on "Success Stories: Positive Impact of Plastics in the daily life of citizens" and (ii) Slogan writing on "Bringing out the positive role of plastics and removing the negativity around use of plastics". The Department also sought ideas through Mygov platform on "Managing Plastic Waste for a better environment. Solutions from origin to end disposal content".

11.30 A National level Workshop on "Plastic waste Disposal and Recycling" was held on 19.09.2018 in continuation of the Swachhta Pakhwada of the Department during the first fortnight of September, 2018, at Murthal. It was inaugurated by Minister of State for Chemical & Fertilizers, Sh. Rao Inderjit Singh.

National Unity Day

11.31 Rashtriya Ekta Diwas (National Unity Day) was observed in the Department on 31/10/2018. On this occasion, Rashtriya Ekta Diwas Pledge was administered by Secretary to officers of the Department.

Make In India

11.32 The Cabinet in its meeting held on 24th May, 2017 approved the "Policy to Provide Preference to Make in India in Public Procurement". Department for promotion of Industry and Internal Trade has issued a public Procurement (Preference to Make In India) Order, 2017 which mandates all Government Agencies to accord Preferences to Make In India in Public Procurement. The policy aims to boost domestic value addition by providing preferential market access and reliable demand to the domestic manufactures in public procurement. The Department of Chemicals & Petrochemicals has been identified as the nodal Department for implementing the provisions related to procurement of goods and services related to 'Chemical' sector.

11.33 Department has issued Public Procurement (Preferences to Make in India) Order for six chemicals viz. (i) Soda Ash, (ii) Caustic Soad, (iii) Aluminium Fluoride, (iv) Carbon Black, (v) Formaldehyde and (vi) Chlorine, on 25th May, 2018.

11.34 Further, the Department has issued Public Procurement (Preference to Make in India) Order 2017 for forty-nine additional Chemicals, Petrochemical, Dyestuff and Pesticides, on 23rd October, 2018.

Redressal of Public Grievances

11.35 An internal grievances redressal machinery functioning in this Department, attends to all the public grievances. During the period 01.04.2018 to 31.3.2019, 823 public grievances were received in the Department. These were attended to promptly. The rate of redressal of Public Grievances in this Department is about 99%. The Deputy Director General (DDG) has been nominated as Nodal Officer of Public Grievances of the Department. The name, designation, room number, telephone number, etc. of the Nodal Officer of Public Grievances has been displayed on the website of the Department (http://chemicals.gov.in/). A Public Grievance Officer has been nominated in each Division as the Nodal Officer who monitors the progress of the redressal of public grievances relating to respective Divisions.

Right to Information Act, 2005

11.36 Under the provisions of the Right to Information Act, 2005, a RTI Cell has been set up in the Department to coordinate the RTI-related work. This Section collects, transfers the application seeking information under the RTI Act, 2005 to the Central Public Information Officers / Public Authorities concerned with the subject matter and submits quarterly returns regarding receipt and disposal of the RTI applications/appeals to the Central Information Commission.

a) All Under Secretary/ Section Officer level officers have been designated as Central Public Information Officers (CPIOs) under section 5(1) of the Act, according to the subjects being handled by them.

b) All Director /Deputy Secretary level officers have been designated as Appellate Authorities in terms of section 19 (1) of the Act, in respect of Under Secretaries/Section Officers working as CPIOs with them.

c) To facilitate the receipt of applications under the RTI Act, 2005, a provision has been made to receive the applications at the Reception Counter of the Department. The applications so received are further forwarded by the RTI Cell to the CPIOs/Public Authorities concerned.

d) During the year 2018-19 i.e. from 01.04.2018 to 31.3.2019, 341 RTI applications and 38 RTI First Appeals were received in this Department. These were promptly transferred/ forwarded to the concerned public authorities/CPIOs for providing information to the applicants.

e) As per para 1.4.1 of DoPT's guidelines issued vide their O.M. No. 1/5/2011-IR dated 15.4.2013, this Ministry has been disposing all RTI applications, appeals and replies of CPIOs and appellate authorities through the portal.

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Annexure – I

PRODUCT-WISE INSTALLED CAPACITY & PRODUCTION OF MAJOR CHEMICALS

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production					CAGR
	2015-16	2016-17	2017-18	2014-15	2015-16	2016-17	2017-18	2018-19	
1	2	3	4	5	6	7	8	9	10
Alkali Chemicals									
SODA ASH	3031.00	3086.00	3464.00	2462.00	2583.01	2613.42	2989.57	3048.19	5.48
CAUSTIC SODA	3102.02	3297.22	3335.94	2442.89	2503.96	2594.50	2742.31	2925.35	4.61
LIQUID CHLORINE	2289.26	2438.51	2474.20	1720.10	1714.82	1800.67	1899.41	2069.11	4.73
Total	8422.28	8821.73	9274.14	6624.99	6801.78	7008.58	7631.30	8042.65	4.97
Inorganic Chemicals									
ALUMINIUM FLUORIDE	25.60	25.60	25.60	6.73	9.51	8.14	7.51	5.70	-4.09
CALCIUM CARBIDE	112.00	112.00	112.00	87.18	83.47	85.02	87.30	83.17	-1.17
CARBON BLACK	640.00	640.00	640.00	444.35	469.56	535.27	530.36	546.39	5.30
POTASSIUM CHLORATE	3.00	3.00	4.60	0.45	0.41	0.01	0.35	0.70	11.99
TITANIUM DIOXIDE	82.50	82.50	82.50	47.88	58.53	58.46	57.82	57.06	4.48
RED PHOSPHORUS	1.68	1.68	1.68	0.89	0.84	0.77	0.88	1.03	3.84
HYDROGEN PEROXIDE	169.23	165.85	165.85	119.75	153.08	148.87	157.02	156.45	6.91
CALCIUM CARBONATE	282.35	282.35	282.35	236.93	226.13	216.33	217.25	213.33	-2.59
Total	**1316.35**	**1312.98**	**1314.58**	**944.15**	**1001.53**	**1052.87**	**1058.48**	**1063.83**	**3.03**
Organic Chemicals									
ACETIC ACID	177.43	177.43	159.62	159.61	157.91	158.51	157.07	153.80	-0.92
ACETIC ANHYDRIDE	118.30	115.43	115.43	93.84	92.99	94.82	97.09	95.47	0.43
ACETONE	47.14	47.14	47.14	25.98	24.96	26.79	32.87	40.74	11.90
PHENOL	76.75	76.75	76.75	42.26	40.42	43.57	53.45	65.39	11.53
METHANOL	474.30	474.30	474.30	209.83	162.62	176.96	260.49	271.93	6.70
FORMALDEHYDE	411.30	411.30	411.30	255.95	242.09	244.19	248.23	226.61	-3.00
NITROBENZENE	91.80	91.80	112.05	69.72	68.37	69.71	71.41	68.80	-0.33
MALEIC ANHYDRIDE	6.40	6.40	6.40	3.20	3.54	3.53	3.31	4.56	9.21
PENTAERYTHRITOL	13.72	13.72	13.72	13.46	13.97	14.01	14.10	14.99	2.73
ANILINE	60.10	54.10	54.10	34.47	39.40	41.45	41.88	37.85	2.36
CHLORO METHANES	221.10	221.10	219.92	220.71	220.18	221.51	222.43	285.53	6.65
ISOBUTYLBENZENE	13.80	13.80	13.80	4.30	7.24	6.92	8.95	9.70	22.52

(Figures In 000' MT)

ONCB	30.00	30.00	30.00	16.13	19.26	22.55	24.90	23.70	10.10
PNCB	30.00	30.00	30.00	26.96	31.27	34.19	37.78	36.07	7.55
MEK	5.00	10.00	10.00	4.02	5.75	6.54	6.40	7.00	14.85
ACETALDEHYDE	189.01	167.01	163.01	67.77	58.96	60.46	65.74	61.89	-2.24
ETHANOLAMINES	17.76	17.76	17.76	13.76	13.25	13.11	13.20	16.70	4.96
ETHYL ACETATE	545.83	520.63	526.63	327.94	360.40	371.27	411.49	440.56	7.66
MENTHOL	33.65	33.65	33.65	17.45	14.73	14.54	13.68	6.24	-22.67
ORTHO NITRO TOLUENE	16.40	16.40	19.00	11.74	11.52	13.80	14.39	16.89	9.52
Total	**2579.78**	**2528.71**	**2534.57**	**1619.11**	**1588.83**	**1638.44**	**1798.85**	**1884.42**	**3.87**
Pesticides and Insecticides									
D.D.T.	6.34	6.34	6.34	3.63	2.09	2.26	1.27	1.37	-21.66
MALATHION	3.80	3.80	3.80	2.24	2.04	2.26	3.29	4.39	18.31
DIMETHOATE	1.45	1.45	1.45	1.43	1.44	1.37	1.18	1.26	-3.22
D.D.V.P.	33.92	33.92	33.62	6.66	7.22	8.13	8.13	9.14	8.24
QUINALPHOS	2.80	2.80	2.20	1.88	0.84	1.29	1.18	0.89	-17.18
MONOCROTOPHOS	13.94	13.94	13.94	6.97	5.48	6.58	5.50	5.30	-6.62
PHOSPHAMIDON	2.00	2.00	2.00	0.13	0.13	0.09	0.11	0.00	-100.00
PHORATE	10.13	12.40	12.40	6.62	5.92	5.91	7.02	5.85	-3.05
ETHION	2.20	2.20	2.20	1.60	1.72	2.11	2.38	1.32	-4.79
FENVALERATE	3.60	3.60	3.60	0.51	0.56	0.53	0.74	0.70	7.94
CYPERMETHRIN	27.79	24.33	24.43	8.59	8.53	7.88	8.25	10.95	6.27
ACEPHATE	19.67	19.67	18.97	17.97	16.58	16.27	18.27	19.63	2.24
CHLORPYRIPHOS	16.85	19.15	18.48	9.73	6.87	5.87	7.98	7.14	-7.44
TRIAZOPHOS	3.90	3.36	3.36	1.00	1.72	2.37	1.54	0.89	-2.98
TEMEPHOS	0.25	0.25	0.25	0.00	0.08	0.08	0.10	0.08	0.00
DELTAMETHRIN	0.61	0.61	0.62	0.51	0.38	0.37	0.55	0.68	7.48
ALPHAMETHRIN	0.50	0.50	0.50	0.75	0.23	0.10	0.32	0.34	-17.59
PROFENOFOS TECHNICAL	12.90	10.50	10.50	7.58	6.85	10.50	9.95	12.45	13.22
PRETILACHLOR TECHNICAL	2.58	2.58	2.58	1.88	1.94	2.58	3.60	3.63	17.91
LAMBDA CYHALOTHRIN	2.40	2.40	2.60	0.47	0.42	0.74	1.14	0.62	7.09
PHENTHOATE	0.90	0.90	0.90	1.40	1.11	1.14	1.32	1.53	2.31
PERMETHRIN TECH	1.97	1.97	1.67	1.70	1.30	1.10	1.53	1.86	2.33
IMIDACALOPRID TECH	1.13	1.13	1.13	0.56	0.20	0.18	0.34	0.10	-34.99

(Figures In 000' MT)

CAPTAN & CAPTAFOL	3.45	3.43	3.43	2.38	2.12	1.79	1.76	1.93	-5.11
ZIRAM(THIO BARBAMATE)	0.70	0.70	0.70	0.58	0.51	0.60	0.72	0.76	7.19
CARBEND ZIM(BAVISTIN)	0.98	0.98	0.98	0.36	0.24	0.13	0.03	0.02	-50.68
MANCOZAB	72.46	77.14	82.39	61.40	66.38	78.48	70.25	69.33	3.08
HEXACONAZOLE	1.08	1.08	1.08	0.59	0.62	0.46	0.59	0.50	-4.13
METCONAZOLE	0.75	0.75	0.75	0.61	0.39	0.35	0.40	0.34	-13.74
2, 4-D	22.00	26.00	27.00	11.62	18.46	23.36	25.83	24.24	20.17
BUTACHLOR	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00
ETHOFUMESATE TECHNICAL	1.56	1.65	1.43	0.62	0.50	1.04	1.29	1.04	13.91
THIAMETHOXAM TECHNICAL	3.10	3.10	3.10	1.66	1.92	2.51	3.28	5.57	35.36
PENDIMETHALIN	3.00	4.50	4.50	2.26	2.82	4.04	3.78	2.82	5.72
METRIBUZIN	1.20	1.20	1.20	0.52	0.91	1.12	0.88	1.92	38.67
TRICLOPYR ACID TECH	0.30	0.30	0.30	0.19	0.30	0.28	0.15	0.13	-10.06
ISOPROTURON	6.25	6.25	6.25	2.43	1.95	0.13	0.00	0.00	-100.00
GLYPHOSATE	9.26	13.16	12.92	9.69	6.96	6.35	6.29	6.68	-8.86
DIURON	3.30	3.72	3.72	0.12	1.26	3.68	3.26	3.62	133.36
ATRAZIN	0.50	0.50	0.50	1.20	1.21	1.90	2.25	1.48	5.37
ZINC PHOSPHIDE	1.32	1.92	1.92	1.29	1.50	1.31	1.40	1.26	-0.59
ALUMINIUM PHOSPHIDE	3.90	4.74	4.74	5.05	5.75	6.40	4.77	4.91	-0.69
DICOFOL	0.15	0.15	0.15	0.11	0.09	0.09	0.08	0.05	-16.51
Total	**307.39**	**321.57**	**325.09**	**186.47**	**187.52**	**213.72**	**212.70**	**216.70**	**3.83**
Dyes and Pigments									
AZO DYES	22.62	22.62	21.14	10.59	9.71	9.89	10.98	8.99	-4.02
ACID DIRECT DYES(OTHER THAN AZO)	44.90	44.90	44.90	17.23	20.57	19.86	21.15	24.13	8.79
DISPERSE DYES	55.21	71.01	67.21	29.56	43.57	41.35	46.72	55.24	16.92
FAST COLOUR BASES	0.50	0.50	0.00	0.01	0.00	0.00	0.00	0.00	-100.00
INGRAIN DYES	1.61	1.61	1.44	0.44	0.30	0.00	0.00	0.00	-100.00
OIL SOLUBLE (SOLVENT DYES)	3.60	3.60	3.60	1.80	2.20	2.23	2.07	2.29	6.22
OPTICAL WHITENING AGENTS	40.90	40.90	40.80	22.94	24.70	23.77	23.21	29.30	6.31

(Figures In 000' MT)

ORGANIC PIGMENT	80.75	80.75	87.04	76.89	61.31	63.74	73.34	62.65	-4.99
PIGMENT EMULSION	5.41	5.41	5.41	9.64	9.67	10.61	10.16	9.78	0.35
REACTIVE DYES	171.82	170.59	178.49	89.47	106.12	120.87	151.86	151.33	14.04
SULPHUR DYES (SULPHUR BLACK)	3.00	3.00	8.25	9.38	9.55	10.07	7.32	7.54	-5.32
VAT DYES	2.98	2.98	2.86	1.77	1.44	1.52	1.65	1.78	0.16
SOLUBILISED VAT DYES	0.13	0.13	0.13	0.03	0.03	0.02	0.02	0.004	-40.54
FOOD COLOURS	0.00	0.00	0.00	0.66	0.71	0.75	0.78	0.786	4.54
NAPTHOLS	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00
INORGANIC PIGMENTS	18.05	18.05	18.05	14.82	14.19	15.41	17.88	16.29	2.39
Total	**452.37**	**466.95**	**480.22**	**285.23**	**304.05**	**320.11**	**367.14**	**370.11**	**6.73**

Note : Production and Installed Capacity data based on MPR received from large and medium scale units only.

Note : Some Pesticides and Dyes manufacturing units supply combined installed capacity.

Annexure-II

PRODUCT-WISE INSTALLED CAPACITY & PRODUCTION OF MAJOR PETROCHEMICALS

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production					CAGR
	2015-16	2016-17	2017-18	2014-15	2015-16	2016-17	2017-18	2018-19	
1	2	3	4	5	6	7	8	9	10
A : BASIC MAJOR PETROCHEMICALS									
I : Synthetic Fibres / Yarn									
1. Polyester Filament Yarn (PFY) ($)	2898.36	2841.29	2715.53	2178.749	2179.003	2200.908	2283.406	2316.43	1.54
2. Nylon Filament Yarn (NFY) ($$)	61.96	63.96	63.96	32.449	37.251	40.906	40.008	46.615	9.48
3. Nylon Industrial Yarn (NIY) ($$)	93.58	93.58	93.58	100.524	94.866	103.559	107.585	109.545	2.17
4. Polypropylene Filament Yarn (PPFY)($$)	3.60	3.60	3.60	5.14	3.467	3.394	3.146	2.356	-17.72
Sub Total Yarn (1+2+3+4)	3057.49	3002.42	2876.67	2316.86	2314.59	2348.77	2434.15	2474.95	1.66
5. Acrylic Fibre (Inc. Dry Spun) (AF)	107.00	107.00	107.00	89.63	105.87	95.39	90.97	99.45	2.64
6. Polyester Staple Fibre (PSF)	1256.56	1256.08	1256.56	1021.25	1039.65	1056.00	1005.30	931.44	-2.27
7. Polypropylene Staple Fibre (PPSF)	32.13	32.13	32.13	25.42	27.04	24.56	22.24	20.74	-4.96
8. Polyester Staple Fibrefil (PSFF)	69.00	69.00	69.00	57.30	51.05	53.65	51.33	52.99	-1.93
9. Polyester Industrial Yarn (PIY)	21.50	21.50	21.50	32.45	37.25	40.91	40.01	46.62	9.48
10.Elastomeric/ Spandex Filament Yarn	5.00	5.00	8.50	100.52	94.87	103.56	107.59	109.55	2.17
Total Synth. Fibre / Yarn	**4548.68**	**4493.13**	**4371.35**	**3643.42**	**3670.32**	**3722.84**	**3751.58**	**3735.74**	**0.63**
II : Polymers									
1. Linear Low Density Polyethylene (LLDPE)	No separate Capacity			910.257	1204.568	1318.263	1290.046	1581.224	14.80

(Figures in 000'MT)

2. High Density Polyethylene (HDPE)	No separate Capacity			1155.794	1317.151	1520.037	1578.378	1597.676	8.43
LLDPE/HDPE (Combined) ($$$)	**3135.00**	**3135.00**	**3135.00**	**2066.05**	**2521.72**	**2838.30**	**2868.42**	**3178.90**	**11.37**
3. Low Density Polyethylene (LDPE)	160.00	160.00	160.00	184.40	200.03	201.76	185.66	193.05	1.15
4. Polyestyrene (PS)	472.00	472.00	471.00	281.17	308.58	311.35	301.58	292.86	1.02
5. Polypropylene (PP)	4456.20	4456.20	4456.20	3614.82	4284.42	4253.39	4350.20	4779.02	7.23
6. Poly Vinyl Chloride(PVC)	1423.00	1493.00	1493.00	1330.44	1437.89	1461.53	1466.08	1488.40	2.84
7. Expandable Polystyrene (EX-PS)	121.80	122.80	126.30	80.68	86.20	96.77	103.91	108.27	7.63
Total Polymers	**9768.00**	**9839.00**	**9841.50**	**7557.57**	**8838.84**	**9163.10**	**9275.85**	**10040.50**	**7.36**
III : Synthetic Rubber									
1. Styrene Butadiene Rubber (SBR)	271.00	271.00	271.00	57.25	124.80	167.33	193.97	228.64	41.37
2. Poly Butadiene Rubber (PBR)	114.00	114.00	114.00	107.54	113.93	117.09	113.63	122.23	3.25
3. Nitrile Butadiene Rubber (NBR)	25.30	25.30	25.30	0.38	0.39	0.35	0.05	0.00	-100.00
4. Ethyl Vinyl Acetate (EVA)	15.00	15.00	15.00	6.42	2.41	0.00	0.00	0.00	-100.00
Total Synthetic Rubber	**425.30**	**425.30**	**425.30**	**171.59**	**241.53**	**284.78**	**307.66**	**350.87**	**19.58**
IV : Synthetic Detergent Intermediates									
1. Linear Alkyl Benzene (LAB)	547.40	547.40	547.40	410.54	377.20	447.65	451.53	454.82	2.59
2. Ethylene Oxide (EO)	140.00	140.00	140.00	185.32	188.31	216.06	291.30	232.34	5.82
Total Synth. Detergent Intermediates	**687.40**	**687.40**	**687.40**	**595.86**	**565.51**	**663.71**	**742.82**	**687.16**	**3.63**
V : Performance Plastic									
1. ABS Resin	128.00	140.00	140.00	107.28	117.01	117.77	145.23	148.18	8.41
2. Nylon-6 & Nylon 66	28.20	28.20	28.20	20.75	21.44	21.54	20.56	21.52	0.92

(Figures in 000'MT)

3. Polymethyl Methacrylate (PMMA)	3.50	3.50	3.50	1.05	1.47	0.29	0.02	0.00	-100.00
4. Styrene Acrylonitrile (SAN)	136.00	148.00	148.00	88.77	98.68	99.24	114.69	131.76	10.38
5. PET Chips/ Polyester Chips	2702.91	2605.06	2477.40	1361.98	1452.93	1548.70	1424.60	1271.09	-1.71
6. PTFE (TEFLON)	19.71	19.80	19.80	11.35	8.75	11.73	13.72	16.24	9.36
Total Performance Plastics	**3018.32**	**2944.56**	**2816.90**	**1591.18**	**1700.27**	**1799.27**	**1718.81**	**1588.79**	**-0.04**
TOTAL BASIC MAJOR PETROCHEMICALS									
(I+II+III+ IV+V)	**18447.70**	**18389.39**	**18142.45**	**13559.61**	**15016.47**	**15633.69**	**15796.72**	**16403.05**	**4.87**
B : INTERMEDIATES									
I : FIBRE INTERMEDIATES									
1. Acrylonitrile (ACN)	41.00	41.00	41.00	33.70	1.94	0.00	0.00	0.00	-100.00
2. Caprolactum	120.00	120.00	120.00	87.05	86.30	86.96	85.97	92.56	1.55
3. Mono Ethylene Glycol (MEG)	1153.40	1153.40	1153.40	1001.14	1158.97	1110.50	1132.65	1159.76	3.75
4. Purified Terephthalic Acid (PTA)	3753.00	3753.00	3873.00	3755.28	3431.78	3390.56	3492.44	3404.93	-2.42
Total Fibre Intermediates	**5067.40**	**5067.40**	**5187.40**	**4877.16**	**4678.98**	**4588.01**	**4711.06**	**4657.25**	**-1.15**
II : BUILDING BLOCKS									
Olefins									
1. Ethylene	4283.40	4233.40	4233.40	3191.90	3727.39	4021.73	4222.68	3831.89	4.67
2. Propylene	4745.63	4745.62	4745.62	3869.40	4456.69	4425.21	4457.91	4639.53	4.64
3. Butadiene	433.00	433.00	433.00	239.45	343.45	347.36	332.38	385.76	12.66
Total Olefins	**9462.03**	**9462.03**	**9412.02**	**7300.74**	**8527.53**	**8794.29**	**9012.97**	**8857.18**	**4.95**
Aromatics									
1. Benzene	1566.15	1566.35	1566.35	1094.38	1332.59	1332.04	1318.03	1414.56	6.63
2. Toluene	287.97	288.27	288.27	108.16	115.74	126.76	106.94	141.14	6.88
3. Mixed Xylene	898.33	898.33	898.33	215.00	269.35	296.03	271.35	249.05	3.74
4. Ortho-xylene	420.00	420.00	420.00	462.46	499.51	444.88	447.76	406.30	-3.18

(Figures in 000'MT)

5. Paraxylene	3131.70	3131.70	3131.70	2757.84	3266.36	3161.30	3194.52	3331.81	4.84
Total Aromatics	**6304.15**	**6304.15**	**6304.65**	**4637.84**	**5483.55**	**5361.02**	**5338.60**	**5542.87**	**4.56**
Total Intermidates									
(I+II)	**20833.58**	**20833.58**	**20904.07**	**16815.75**	**18690.06**	**18743.32**	**19062.62**	**19057.29**	**3.18**
C : OTHER PETRO-BASED CHEMICALS									
1. Butanol	26.00	26.00	26.00	4.20	11.08	12.47	17.39	21.69	50.73
2. C4-Raffinate	291.60	291.60	291.60	364.61	428.64	437.17	339.20	380.26	1.06
3. Di-Ethylene Glycol	84.50	84.50	83.30	100.96	114.24	108.24	105.70	107.41	1.56
4. Diacetone Alcohol	9.50	9.50	9.50	0.00	0.00	0.00	0.21	4.07	
5. Ethylene Dichloride (By Product)	593.20	593.20	593.20	285.30	277.35	282.57	282.35	339.20	4.42
6. 2-Ethyl Hexanol**	55.20	55.20	55.20	13.89	44.41	45.59	56.64	58.89	43.49
8. Iso-Butanol	2.80	2.80	2.80	0.67	1.86	1.96	2.23	2.21	34.65
9. Isopropanol (IPA)	70.00	70.00	70.00	74.98	71.18	72.47	71.83	58.27	-6.11
10. Methyl Methacrylate (MMA)	4.38	4.38	4.38	3.47	2.28	0.54	2.83	3.99	3.56
11. Phthalic Anhydride (PAN)	349.05	349.05	349.05	291.52	305.78	296.07	290.01	275.07	-1.44
12. Propylene Oxide (PO)	36.00	36.00	36.00	36.61	25.59	29.34	36.00	35.12	-1.03
13. Propylene Glycol (PG)	20.00	20.00	20.00	16.25	13.65	16.35	17.64	19.13	4.17
14. Polyvinyl Acetate Resin	17.34	17.34	17.34	0.00	0.00	0.00	0.00	0.00	0.00
15. Vinyl Acetate Monomer (VAM)	30.00	30.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00
16. Vinyl Chloride Monomer (VCM) (By Product)	541.30	541.30	541.30	717.88	790.71	791.26	777.98	803.62	2.86
17. Polyol	142.00	141.63	141.63	51.78	71.80	78.72	79.43	82.13	12.22
18. PBT	*	*	*	0.50	0.50	0.61	0.58	1.29	26.60

19. Polycarbonate	*	*	*	0.16	0.17	0.15	0.09	0.12	-8.49
Total Other Petro-based Chemicals	**2272.87**	**2272.87**	**2272.49**	**1962.81**	**2159.22**	**2173.50**	**2080.10**	**2192.46**	**2.80**
($) : Includes capacity of all the units producing PFY, NFY, NIY and PPFY under broadbanding as Synthetic Filament Yarn : * Includes capacity with Nylon 6, 66									
($$) : Independent capacity of units producing only NFY, NIY and PPFY.									
As the capacities of these products are also included in Synthetic Filament yarn, capacity utilisation can not be worked out.									
($$$) : Combined capacity to produce both LLDPE and HDPE and hence capacity utilisation can not be worked out. However production is independent.									
(** : Combined capacity of 2-EH, Butanol & Iso Butanol is given under 2 - EH)									
Note : 1.Production and Installed Capacity data based on MPR received from large and medium scale units only.									

Annexure-III

HAZARDOUS CHEMICALS UNDER ROTTERDAM CONVENTION

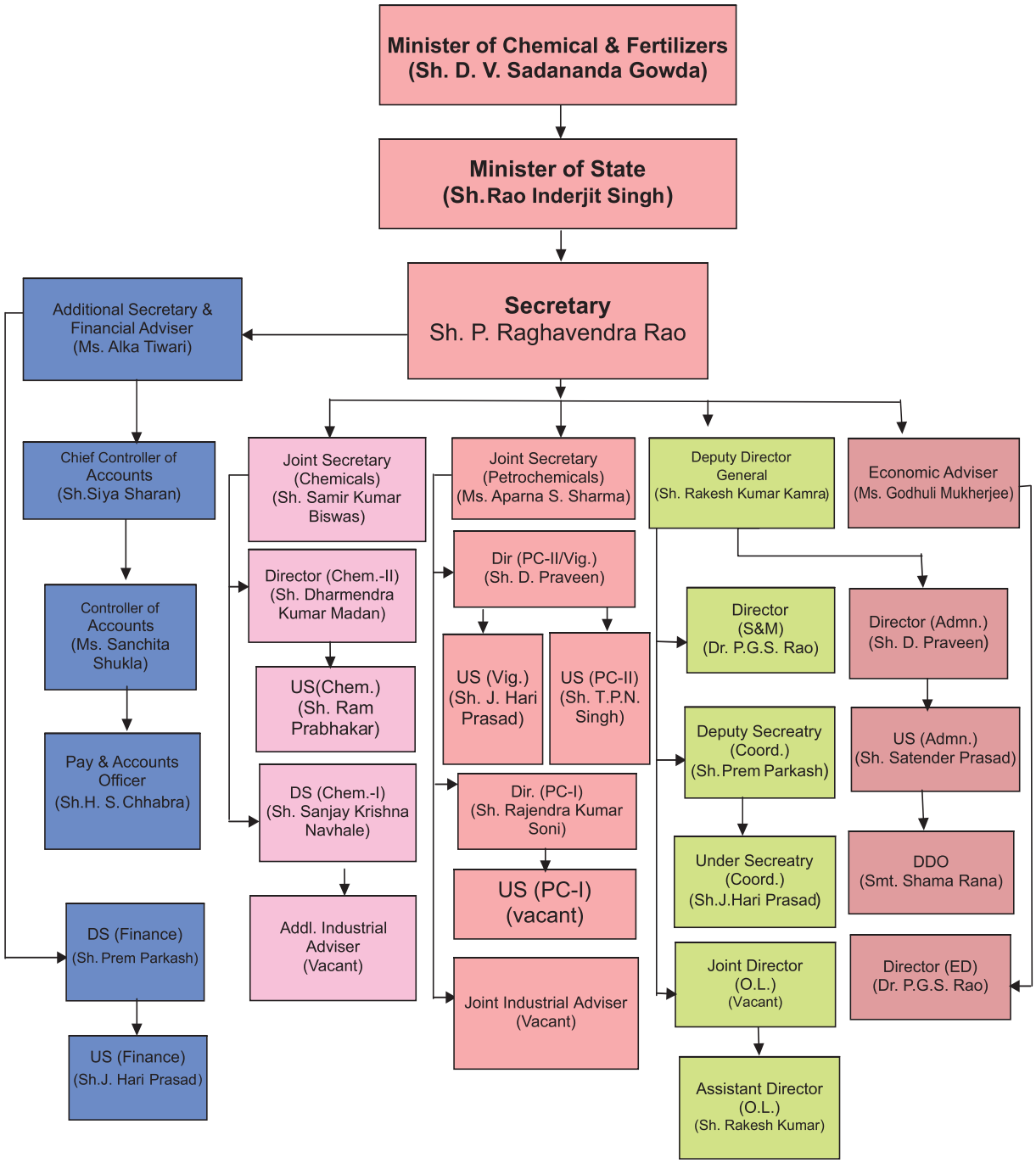
{Total -50 chemicals, 34 are pesticides (including 3 severely hazardous pesticide formulations), 15 industrial chemicals and 1 chemical in both the pesticide and the Industrial chemical categories.}

S. No.	Category	
1	2,4,5-T and its salts and esters	Pesticide
2	Alachlor	Pesticide
3	Aldicarb	Pesticide
4	Aldrin	Pesticide
5	Azinphos methyl	Pesticide
6	Binapacryl	Pesticide
7	Captafol	Pesticide
8	Carbofuran	Pesticide
9	Chlordane	Pesticide
10	Chlordimeform	Pesticide
11	Chlorobenzilate	Pesticide
12	DDT	Pesticide
13	Dieldrin	Pesticide
14	Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	Pesticide
15	Dinoseb and its salts and esters	Pesticide
16	1,2-dibromoethane (EDB)	Pesticide
17	Endolsulfan	Pesticide
18	Ethylene dichloride	Pesticide
19	Ethylene oxide	Pesticide
20	Fluoroacetamide	Pesticide
21	HCH (mixed isomers)	Pesticide
22	Heptachlor	Pesticide
23	Hexachlorobenzene	Pesticide
24	Lindane (gamma-HCH)	Pesticide
25	Mercury compounds including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	Pesticide
26	Methamidophos	Pesticide
27	Monocrotophos	Pesticide
28	Parathion	Pesticide

29	**Pentachlorophenol and its salts and esters**	Pesticide
30	**Toxaphene (campheclor)**	Pesticide
31	**Tributyltin compounds**	Industrial Chemical/ Pesticide
32	**Trichlorfon**	Pesticide
33	**Dustable powder formulations containing a combination of : benomyl at or above 7 per cent, carbofuran at above 10 per cent, thiram at or above 15 per cent**	Severely hazardous pesticide formulation
34	**Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)**	Severely hazardous pesticide formulation
35	**Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)**	Severely hazardous pesticide formulation
36	**Actinolite Asbestos**	Industrial
37	**Anthophyllite Asbestos**	Industrial
38	**Amosite Asbestos**	Industrial
39	**Crocidolite Asbestos**	Industrial
40	**Tremolite Asbestos**	Industrial
41	**Commercial octabromodiphenyl ether (including Hexabromodiphenyl ether and Heptabromodiphenyl ether)**	Industrial
42	**Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)**	Industrial
43	**Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls**	Industrial
44	**Polybrominated biphenyls (PBBs)**	Industrial
45	**Polychlorinated biphenyls (PCBs)**	Industrial
46	**Polychlorinated terphenyls (PCTs)**	Industrial
47	**Short-chain chlorinated paraffins (SCCP)**	Industrial
48	**Tetraethyl lead**	Industrial
49	**Tetramethyl lead**	Industrial
50	**Tris (2,3-dibromopropyl) phosphate**	Industrial

Annexure-IV

ORGANISATIONAL CHART OF DEPARTMENT OF CHEMICALS & PETROCHEMICALS (As on 31.03.2019)



Chem: Chemicals
PC: Petrochemicals
Vig: Vigilance
O.L: Official Language
Coord : Coordination
S&M : Statistics & monitoring

Government of India
Ministry of Chemicals & Fertilizers
Department of Chemicals and Petrochemicals
Shastri Bhawan, Dr. Rajendra Prasad Road, New Delhi - 110001
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