

Senior Officials Meeting on 3R Initiatives.



Structure of Presentation

- Policies on 3R in India
- Strategies for 3R adopted in India
- Activities on 3R initiated in India
- Cleaner Technology and Waste Minimisation efforts
- Registration scheme and recycling of wastes
- Plastic waste and recycling

Policies ,Strategies and Activities

- **Policies**

- **National Conservation Strategy & Policy Statement on Environment and Development.,1992**
- **Policy Statement on Abatement of Pollution., 1992**
- **National Environment Policy,(NEP),2005**

- **Strategies**

- **Charter on Corporate Responsibility for Environment Protection (CREP)**
- **Scheme for “Registration of Recyclers/Reprocessors actual users having ESM facilities**

- **Activities**

Promotion of Cleaner Technologies and Waste Minimisation Circle

National Conservation Strategy & Policy Statement on Environment and Development, 1992

- **Objectives:-to resolve the conflicts which often arise between the environmental concerns and developmental pursuits that have a direct bearing on the very fabric of the society and life styles.**
- **Enumerates :**
 - 1) **some of the specific means through which it is proposed to attain the goals of an environmentally wise society.**
 - 2) **many positive factors emerging: people's movements to conserve their own environment, greater public and media concern for environmental issues and spread of environmental awareness among children and youth.**

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National Conservation Strategy & Policy Statement on Environment and Development, 1992

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- **States :-**

It is up to us, as State and citizens, to undertake development process in keeping with our heritage and the traditional conservation ethos and in harmony with the environmental imperatives of this land.

The Policy Statement for Abatement of Pollution

- **The policy statement for abatement of pollution was released in 1992.**
- **The objective is to integrate environmental considerations into decision making at all levels.**

To achieve this, steps to be taken are :

- 1. prevent pollution at source;**
- 2. encourage, develop and apply the best available practicable technical solutions;**
- 3. ensure that the polluter pays for the pollution and control arrangements;**
- 4. focus protection on heavily polluted areas and river stretches; and**
- 5. involve the public in decision making**

Draft National Environment Policy,(NEP), 2005-

- **Ref to 3Rs**
- **NEP lays stress on adoption of Cleaner technology, strengthening of the informal sector system of collection and recycling of various materials and develop and implement strategies for recycle, reuse and final Environmental benign disposal.**
- **The NEP is under finalisation after stakeholder consultations.**

Charter on Corporate Responsibility for Environment Protection (CREP)

- **The Charter is a commitment for partnership and participatory action of the stakeholders to not only comply with the regulatory norms but to go beyond compliance and to reduce pollution in the 17 identified highly polluting sectors.**

Scheme for "Registration of Recyclers/ Reprocessors"

- **A registration scheme with an aim to establish ESM facilities for recycling of wastes established.**
- **The scheme is designed to register installations with env.sound technology for recycling of waste oil, non ferrous metallic wastes, lead batteries etc.**
- **Ensure that industries generating these wastes auction them only to registered units in the country.**
- **Schemes augmented to support financially waste to energy projects, and establishment of bio-gas projects from organic wastes.**
- **A separate ministry on non conventional energy sources has also been established to promote alternate energy sources and energy recovery from**

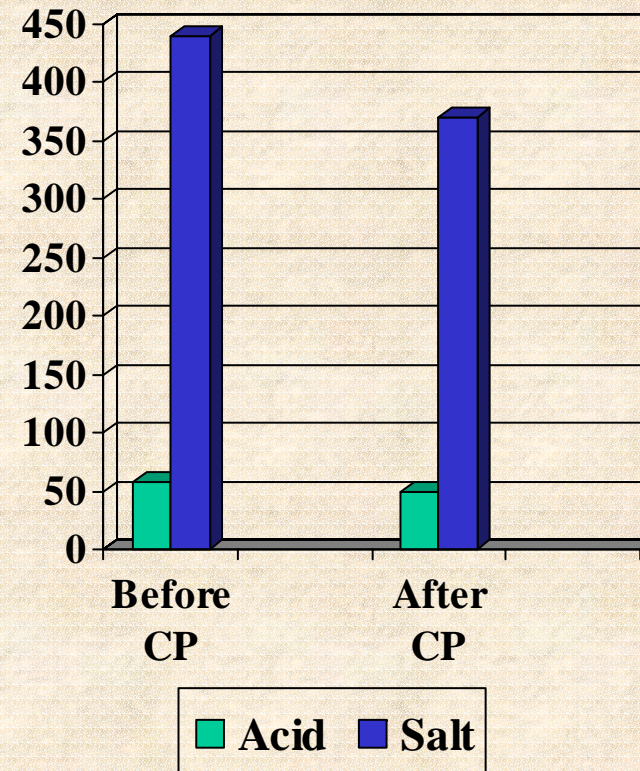
wastes

Promotion of Cleaner Technologies and Waste Minimisation Circle

- **A scheme on Adoption of clean technology and promotion and establishment of waste minimization circles in small and medium scale industries is being implemented.**
- **An Indian centre for promotion of cleaner technology has been established for waste reduction treatment and disposal and to identify and exchange potential recyclable waste.**

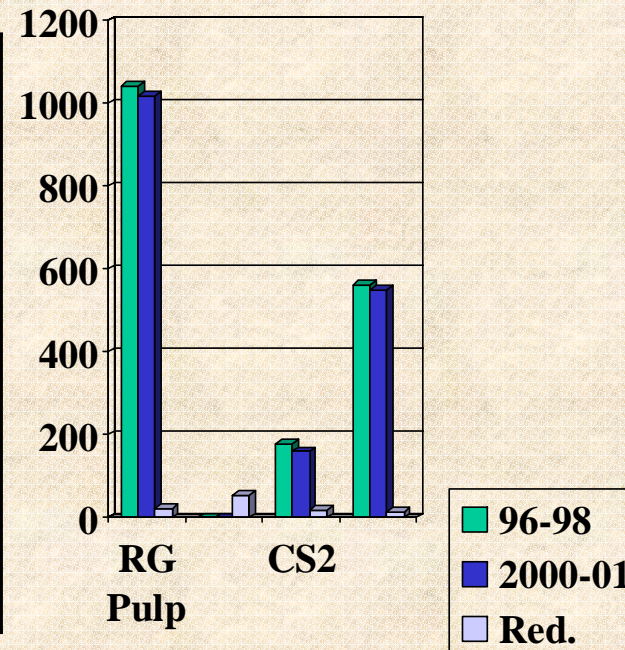
Textile Processing

Use	Before CP(PA)	After CP(PA)	% change
Acid	57.5	49	15
Salt	440	370	16



Viscose staple fibre industry Raw Material Savings (kg/T Fibre) Zn free process technology

Item	96-98	2000-01	Red.
R.G Pulp	1042	1019	23
Zn	1	0	53
Cs2	179	160	19
NaoH	563	549	14



Registration Scheme

- Basic objective is to channelise the indigenously generated and imported recyclable waste to only those units with the necessary facilities/technology to reprocess such waste in an environmentally sound manner.

Items covered

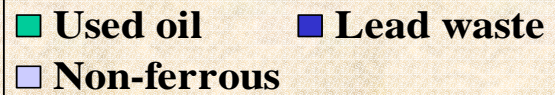
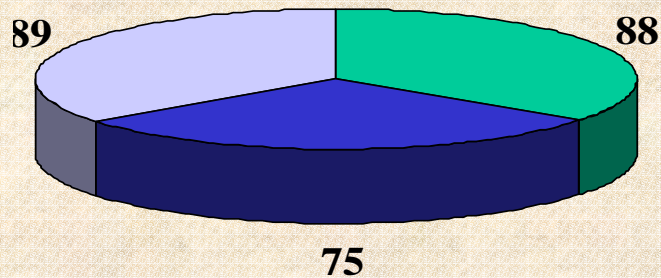
- Used Oil
- Lead wastes including used lead acid battery scrap
- Other non-ferrous metal wastes such as copper, brass, zinc, tin, nickel, aluminium etc.

Reprocessing of Zinc Ash/Skimming

- **Secondary zinc production accounts for nearly 28% of zinc production.**
- **Over 145 zinc sulphate units in SSI sector - zinc sulphate is reserved for exclusive manufacture in the SSI sector.**
- **Over 20 secondary zinc metal producers**
- **Traditional technologies adopted**

Status of Registered Units

Registered Recyclers



Used Oil Reprocessors - 88

Lead waste Reprocessors - 75

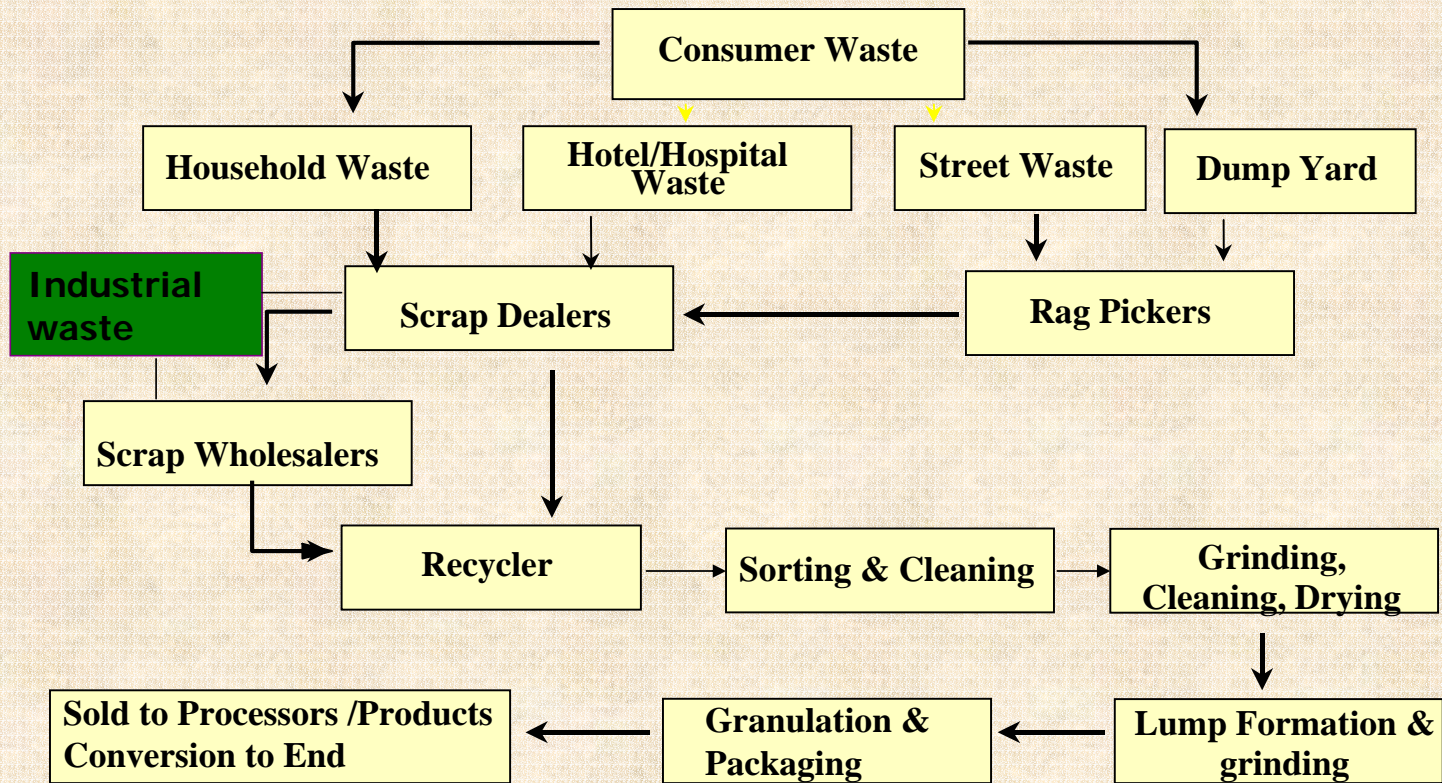
Non-Ferrous Reprocessors - 89

Total - 252

Plastic Reprocessors:- 2090

Registered:- 476

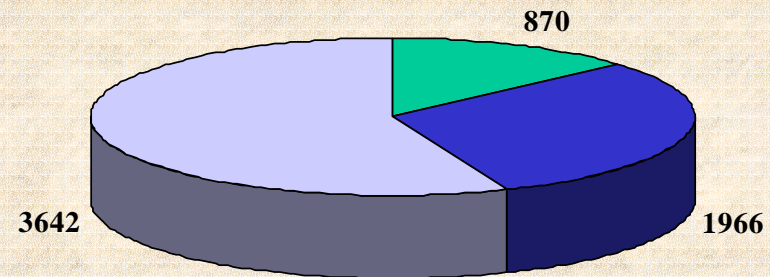
Plastic Waste



Technology and Information Sharing.

- Spent Acid Recovery
- Solvent extraction of Copper from Copper dross etc.-salicyldoxime- similar tech with M/S Sumitomo, Japan.
- Zn free technology for Viscose fibre.

Trends in plastic waste generation



■ 1995-1996 ■ 2001-2002 ■ 2006-2007

Description	1995-1996	2001-2002	2006-2007(pro)
Total Polymers	1889	4374	8054
Process waste (2%)	38	87	161
Post consumer waste	*870 (46%)	1966 (45%)	3624 (45%)

Plastic Recycling

(2004- 05)

Volume Generated - **2.7 Million MT**

Volume Recycled - **1.7 Million MT**

No. of Units - **~7,300**

Eg. in Material Recycling

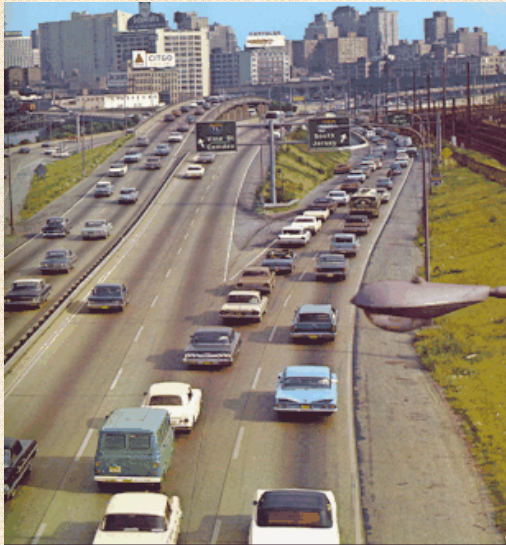
Turnover(Rs.Cr) - **~6,715**

Value Add.(Rs.Cr) - **~1,600**

Pickers Employed - **~1.3 Million**

Employment - **~3.5 Million**

Recycling Technology Development



Mixing of plastic waste and Bitumen for Road

Successful trials conducted in Chennai / Bangalore.

....To be replicated at national level

Products



Basket photo



Plastic Waste



Box strapping



Plastic Footwear

Products



Thank you

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