




# CHEMPLAST SANMAR

**Presentation on ZLD**  
**Water India - New Delhi**

Chemplast Sanmar Limited

Every drop counts



## The Sanmar Group


Diversified Group – Chemicals, Engineering, Metals and Shipping

Chemplast – Flagship company of the group

- Mettur Location – Refrigerant Gases, PVC, Chlorochemicals, Fumed Silica
- Karaikal – Caustic Soda and EDC
- Cuddalore – PVC
- Specialty Chemicals

Chemplast Sanmar Limited

Every drop counts




## The Sanmar Group

**Governing Principle – Water Management**

- Every facility to be Zero Liquid Discharge (ZLD)
- No Ground water to be consumed for Industrial purposes in a chemical plant.
- All new Plants to explore and implement water conservation in design stage.

Chemplast Sanmar Limited

Every drop counts



## Water Usage - Mettur

Less water loss of water in industry

Good Control on water usage that goes along with the product

Good Control on Cooling water requirement

Industrial use about 75-100 Liters per person (data given later) is within the average

Therefore focus was to

1. Recycle the effluent generated to reduce water consumption
2. Reduce the effluent generation
3. Reduce water consumption at source

In line with the Governing principle of the group focus was to Reduce water consumption and achieve Zero Liquid Discharge (ZLD)

Chemplast Sanmar Limited

Every drop counts

## Water Usage - Mettur

**Water with the product**

Water in Caustic soda, HCl. Electronic control measures available.

**Cooling towers**

Make up for Evaporation loss and Blowdown. Control on Cycle of Concentration.

**Effluent**

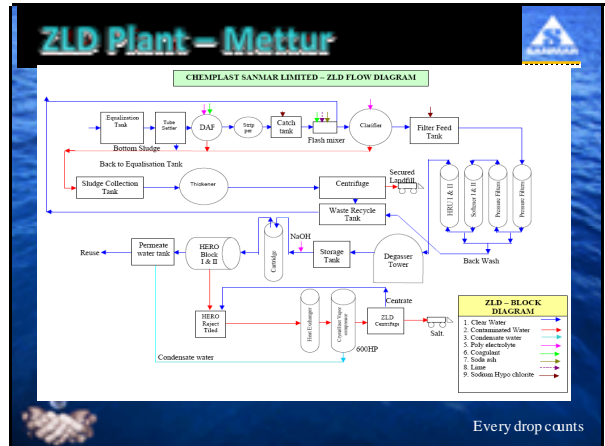
Process streams, equipment washings, floor washings, regeneration of DM Plant.

**Industrial Canteen etc.,**

Bathing – Employees, Contractors. Canteen – Usage for food and washings. Drinking water.

Chemplast Sanmar Limited

Every drop counts



## ZLD Plant – Mettur

Installed ZLD Plant in March 2008 for PVC and Caustic Chlor Plants – Investment Rs 2700 Lakhs

Novel Approach – Process streamlined by Oct 2008.

Operation cost of Rs 600 Lakhs per annum

About 25 Days in a month of ZLD from date of installation itself.

\* Varying effluent quality  
\* Quantity of effluent

Chemplast Sanmar Limited

Every drop counts

## ZLD – Management Plan

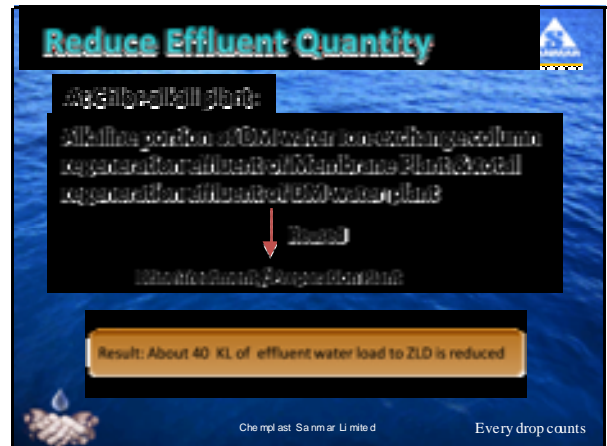
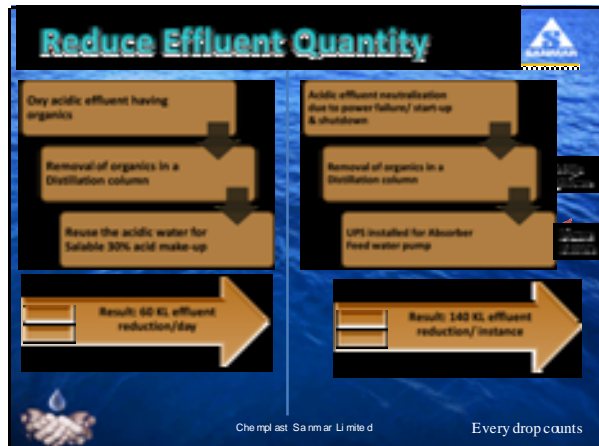
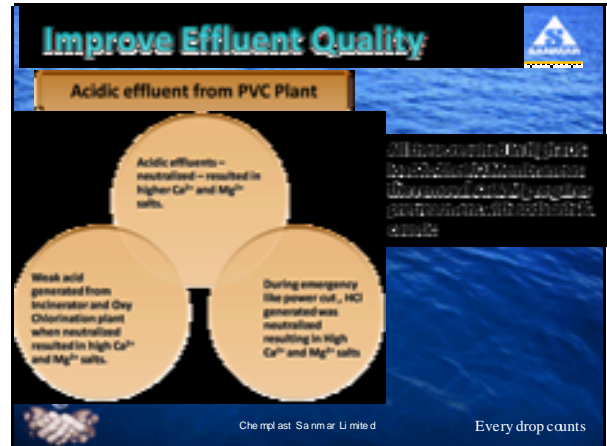
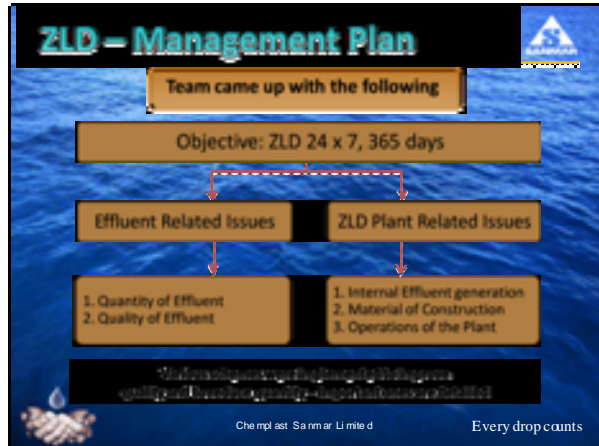
To achieve the objective of ZLD

Team of best engineers assigned to the task	Provided with resources – Financial and Technical.	Regular review process
---	--	------------------------

All projects were part of EMP's as per ISO 14001

Chemplast Sanmar Limited

Every drop counts



## Reduce Effluent Quantity

**Polymer effluent**

- Change of treatment system from conventional treatment to new generation dual Poly electrolyte system
- Trials with atleast 10 poly electrolytes undertaken
- Extensive Lab trials and plant trials made
- Good electrolyte chosen

**Result:**

- No increase in TDS or chlorides.
- Met the cooling water specification
- Polymer effluent of around 400 KL/day is being recycled to cooling tower make-up

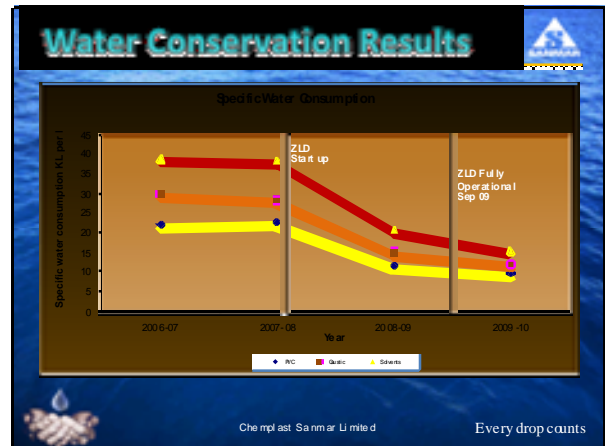
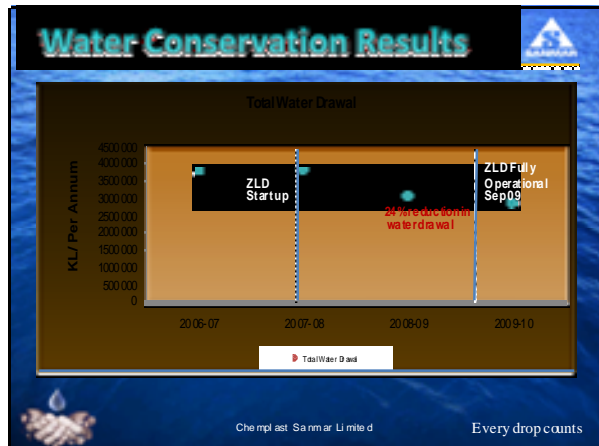
Result: ZLD load to the tune of 400 KLD is reduced

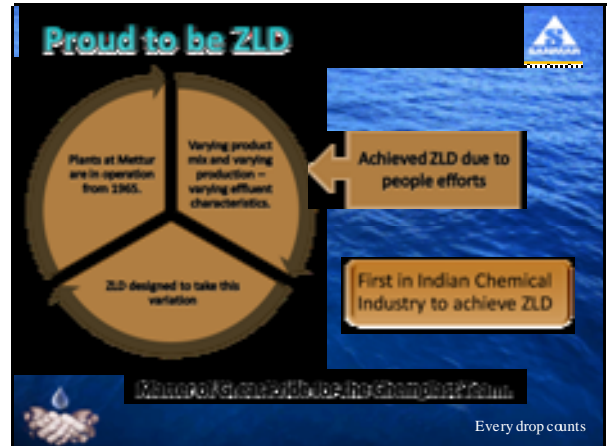
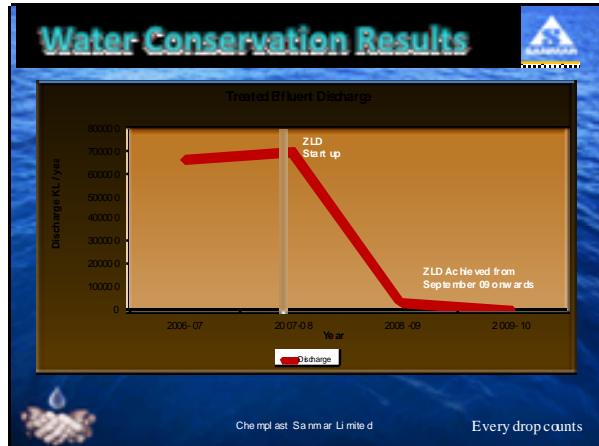
## Results of Efforts

**Prior to measures**

**Present**

Every drop counts





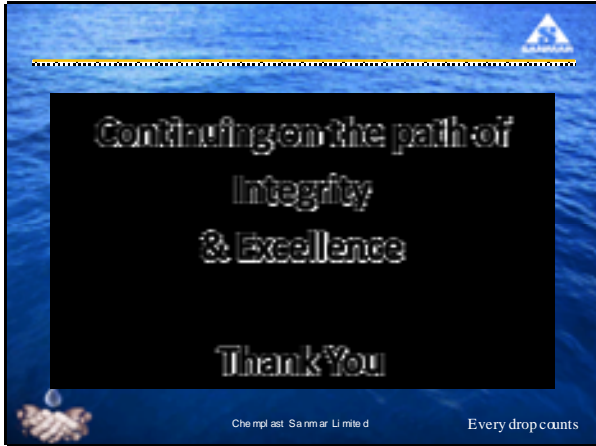
- ### The Way Forward
- Continue to remain ZLD 24 x 7, 365 days
  - Reduce per capita consumption in colony - focus area for this year EMS.
  - Continue to work on reduction of per capita consumption of industrial use.
- Chemplast, Salem Limited
- Every drop counts

### Video

Video on ZLD and the measure taken

Chemplast, Salem Limited

Every drop counts



Continuing on the path of  
Integrity  
& Excellence

Thank You

Chemplast Sammar Limited

Every drop counts