



**GUIDED SELF-REGULATION INITIATIVE PROGRAM
SEMINAR ON
ENVIRONMENTAL MAINSTREAMING OF PALM OIL MILL SECTOR**

**PEMATUHAN & PERUNDANGAN
KILANG SAWIT**

By:

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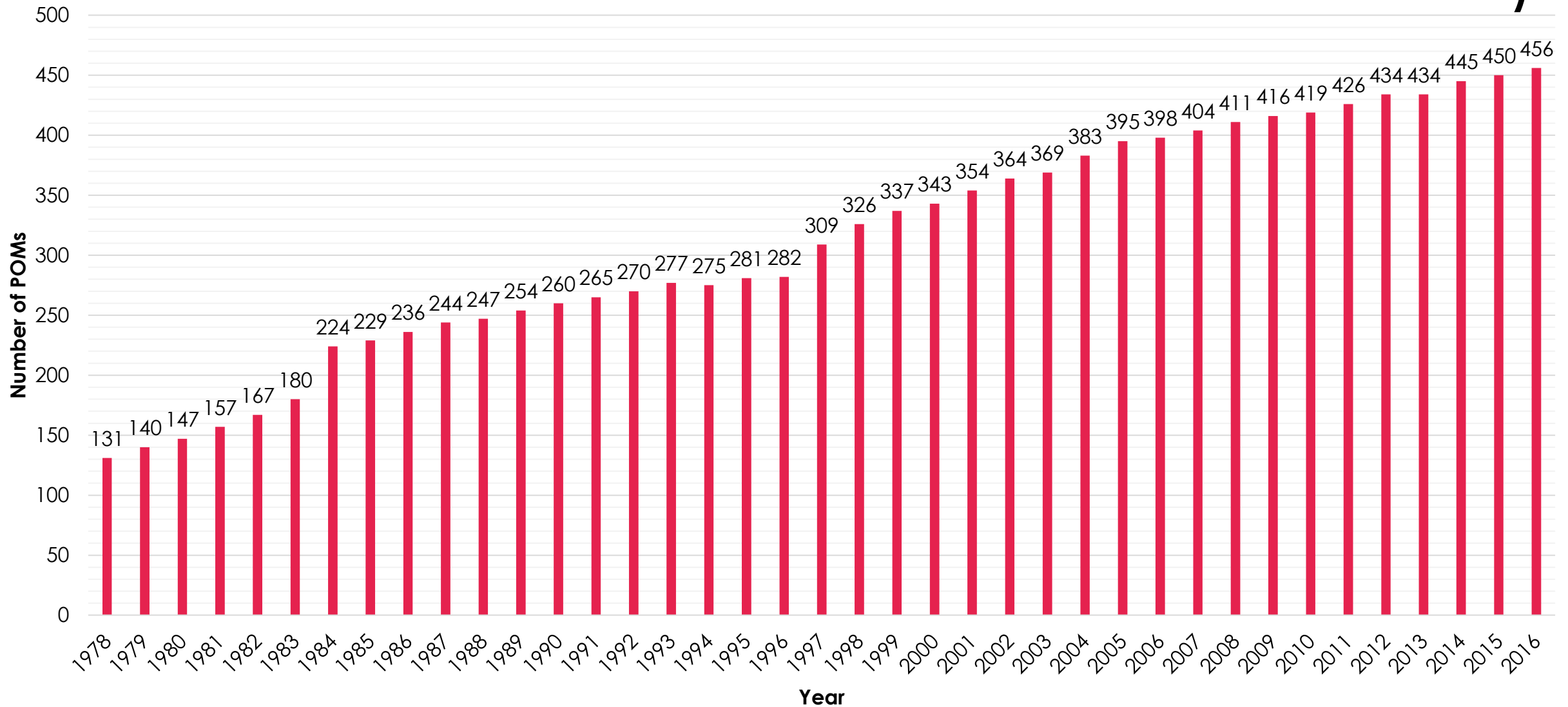
PRESENTATION CONTENTS

- 1) INTRODUCTION**
- 2) CURRENT REGULATORY REQUIREMENT FOR PALM OIL MILLS**
- 3) CURRENT STANDARD OF DISCHARGE FOR CRUDE PALM OIL MILLS EFFLUENT**
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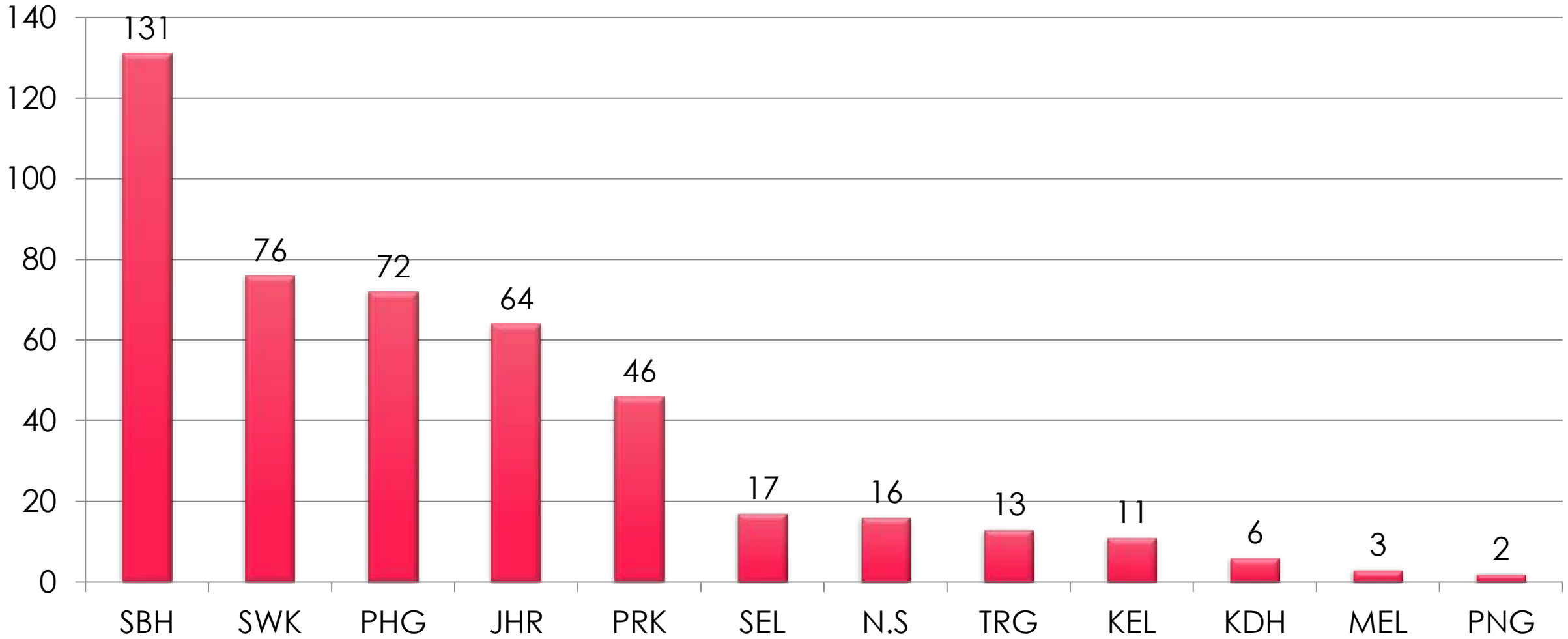
OBJECTIVES

- To expose top management and mill operators about the new approach of DOE Compliance -Guided Self-Regulation;
- To provide information to mill operator the processing technology that can reach 20 mg/L for the Biochemical Oxygen Demand (BOD₃); and
- Delivering DOE strategies and initiatives to ensure the operation and maintenance of environmental pollution control equipment implemented optimally and effectively to improve industry compliance with emission standards.

NUMBERS OF POMs IN MALAYSIA (1978-2016)



LICENSED PALM OIL MILLS IN MALAYSIA



REGULATORY REQUIREMENT FOR PALM OIL MILLS

EFFLUENT

**Environmental Quality (Prescribed Premises)
(Crude Palm Oil) Regulations, 1977**

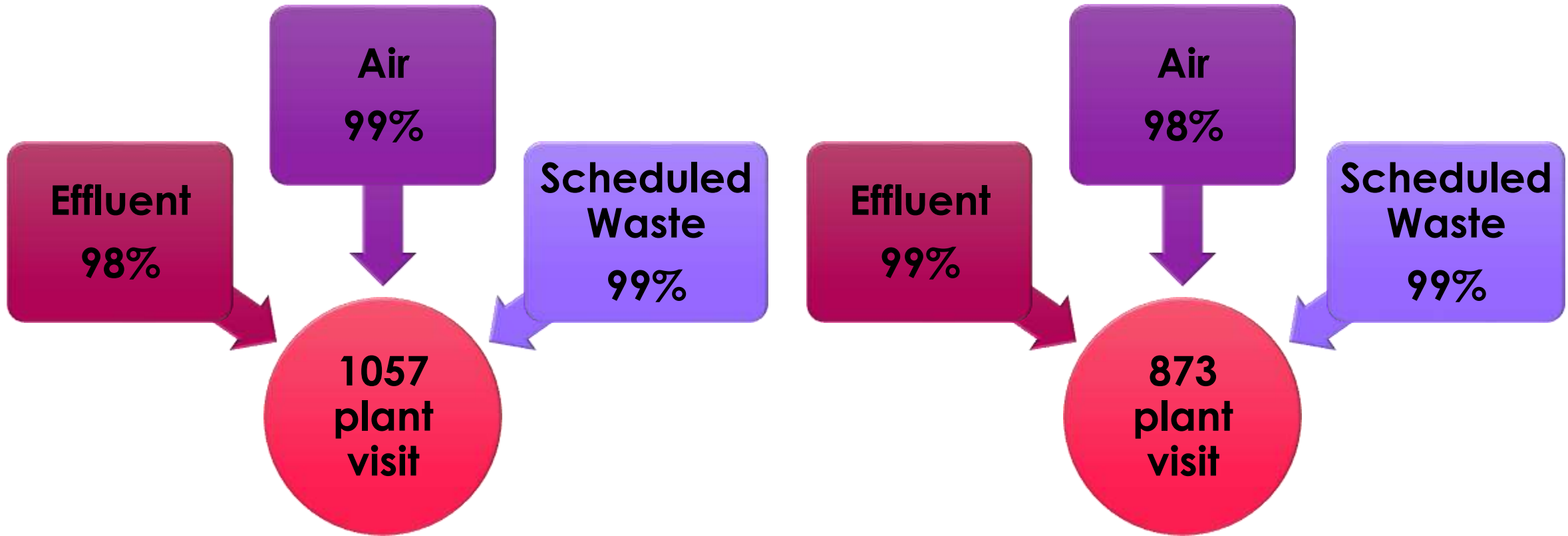
AIR

Environmental Quality (Clean Air) Regulations, 2014

SCHEDULED WASTE

**Environmental Quality (Scheduled Waste) Regulations,
2005**

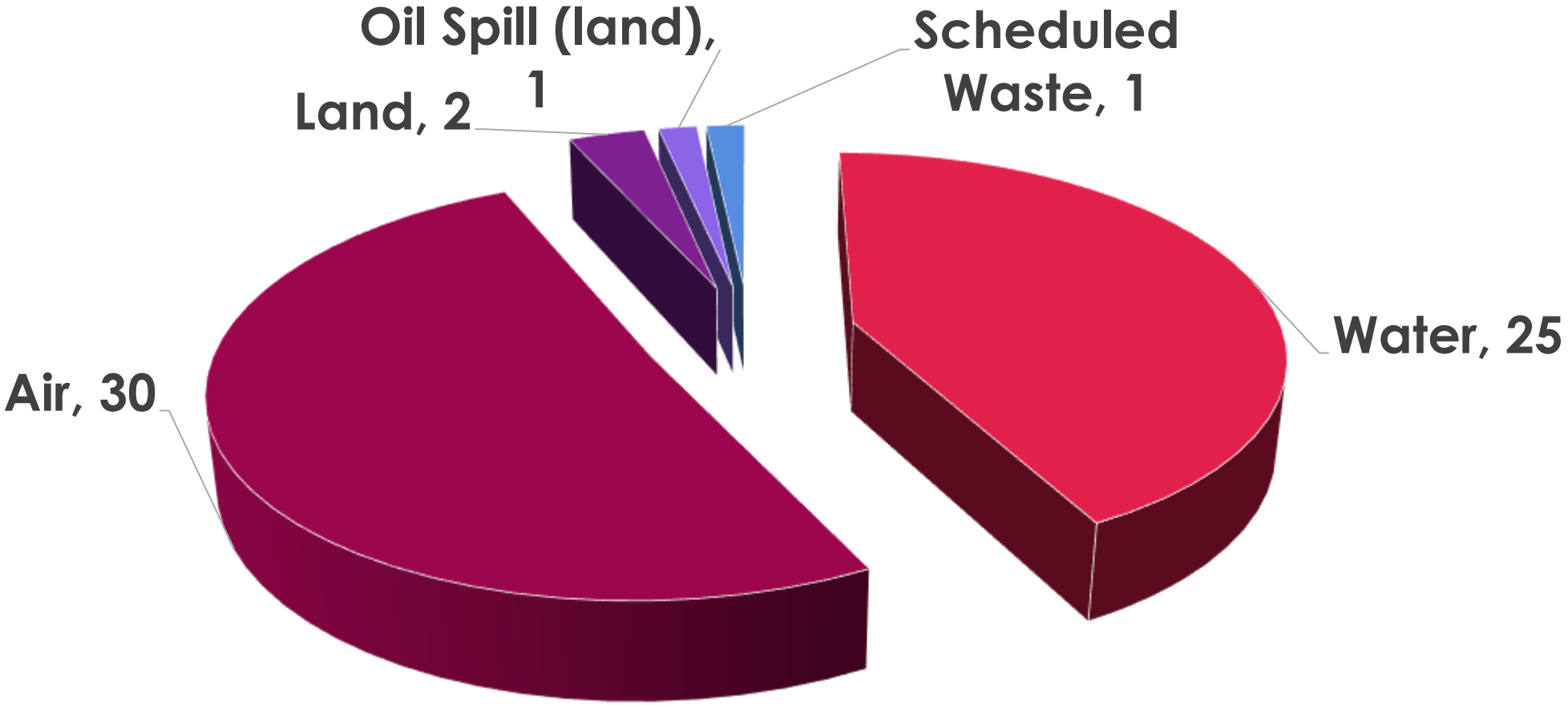
COMPLIANCES



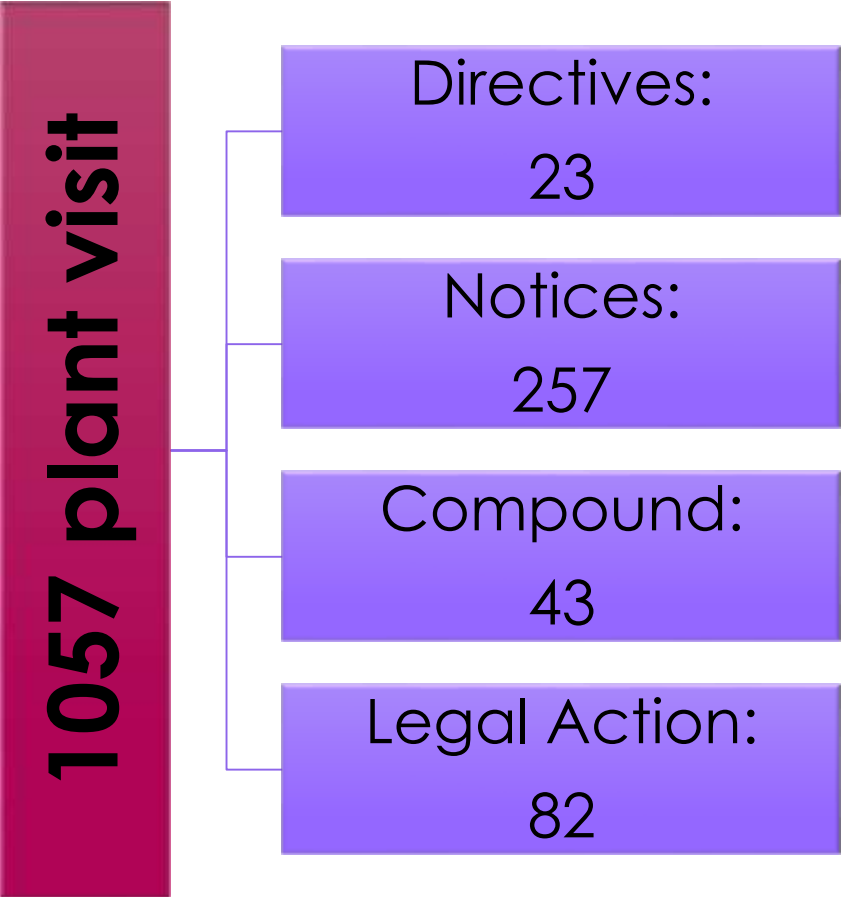
2015

2016 (until September)

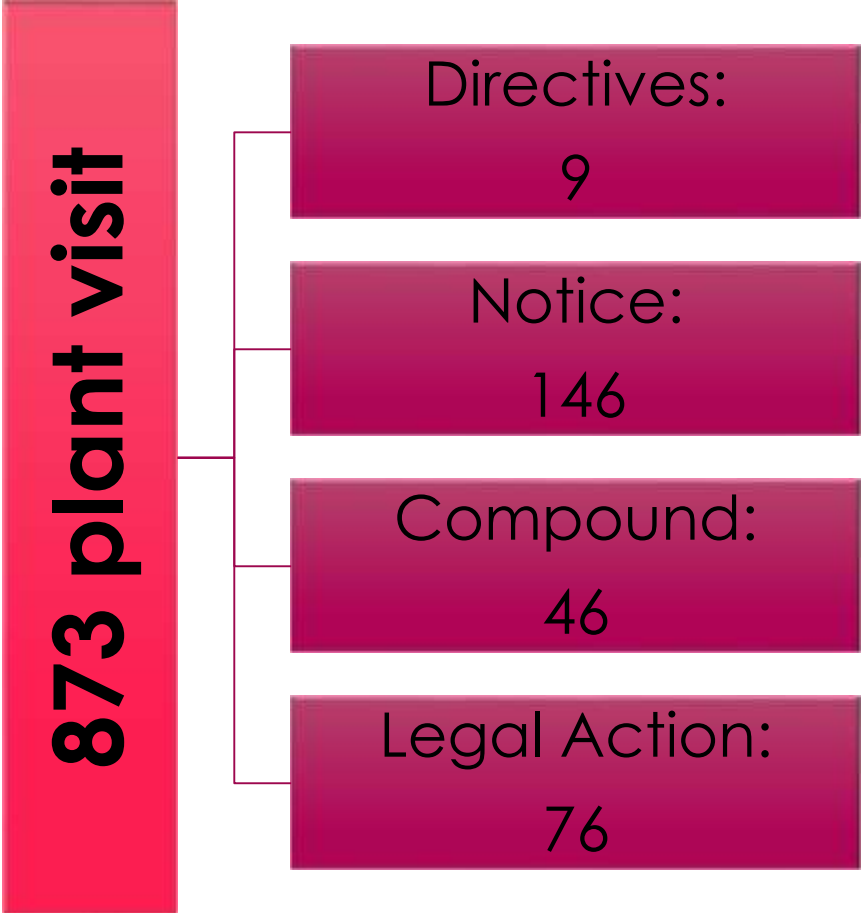
COMPLAINTS ON POMS



ENFORCEMENTS

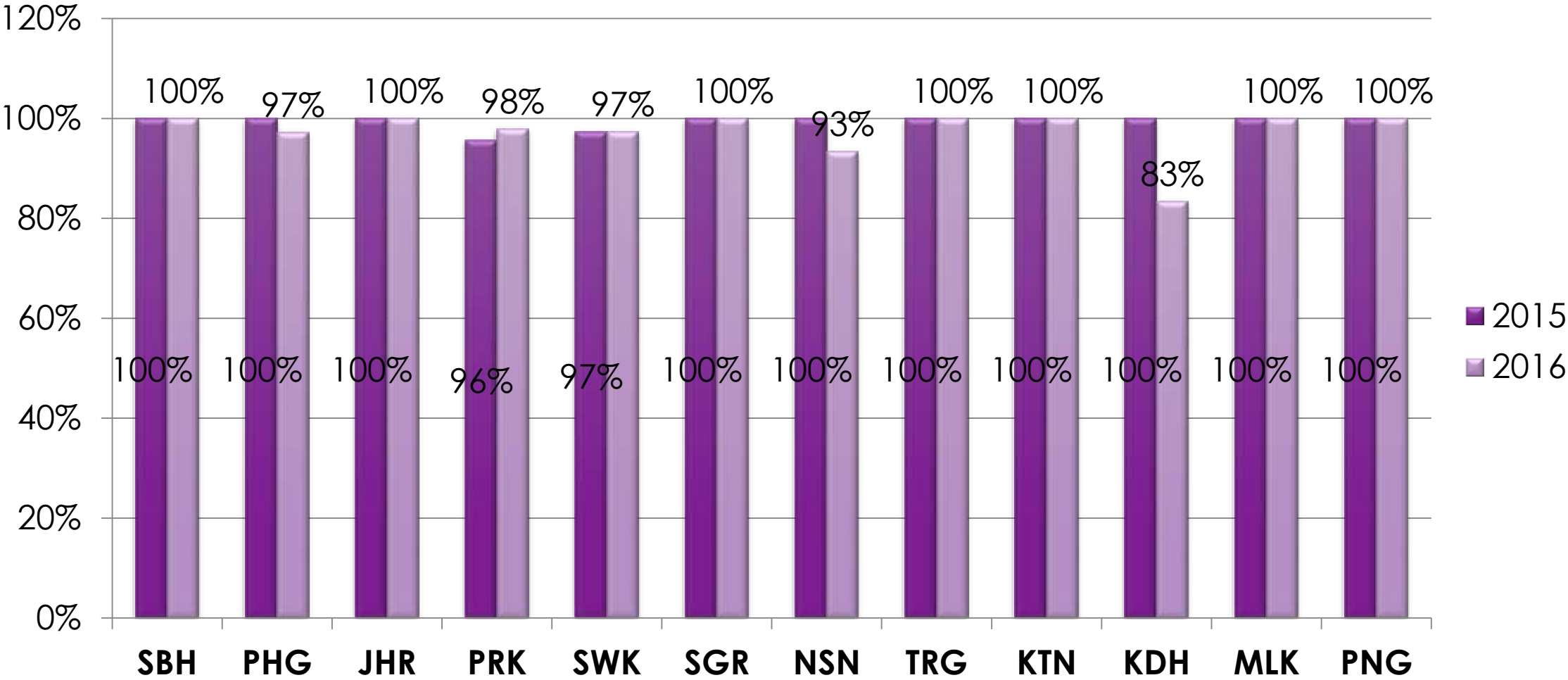


2015



2016 (until Oct 2016)

ENVIRONMENT QUALITY (CLEAN AIR) REGULATIONS, 2014



ENVIRONMENT QUALITY (CLEAN AIR) REGULATIONS, 2014

Reg. 5 Obligation to notify

- Any changing in operation or emission

Reg 6 Measures to reduce emission

- Best Available Techniques Economically determined by DG

Reg 7 Air Pollution Control System

- Equipped with APCS and supervised by Competent Person

Reg 8 Failure in Operations of Air Pollution Control System

- Notified DG within 1 hr

ENVIRONMENT QUALITY (CLEAN AIR) REGULATIONS, 2014

Reg. 9

Performance Monitoring of APCS

- Equipped premise with control system and done performance monitoring

Reg 10

Maintenance of Record

- Maintain records and keep at least three years

Reg 12

Opacity

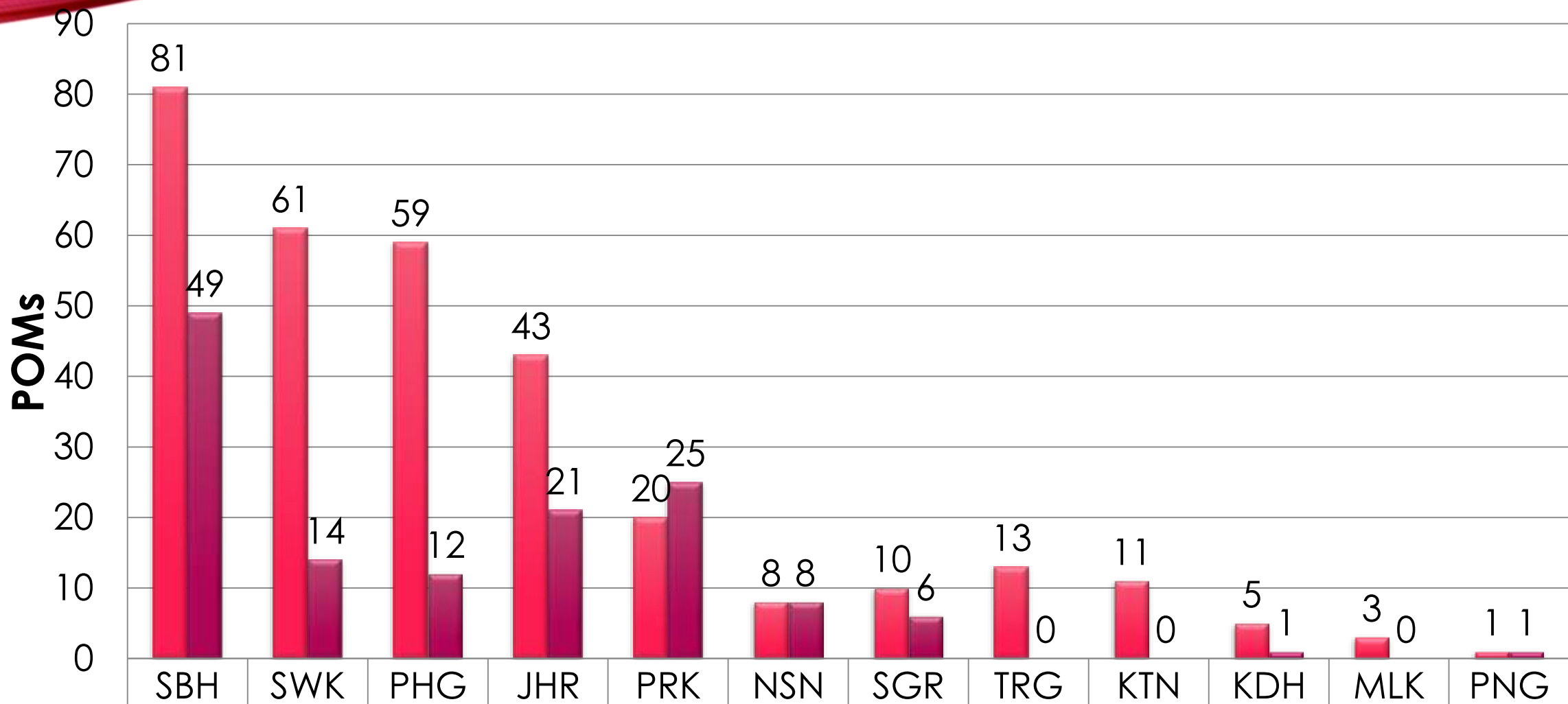
- Equipped with Transmissometer

Reg 13

Limit Values and Technical Standards

- Must comply the limit

STATUS OF CEMS AT POMs



Data

UPDATE	81	61	59	43	20	8	10	13	11	5	3	1
NOT UPDATE	49	14	12	21	25	8	6	0	0	1	0	1

ENVIRONMENT QUALITY (SCHEDULED WASTES) REGULATIONS 2005

- **Crude palm oil mills are classified as “waste generators” under this regulations.**

Most common types of scheduled wastes found are:

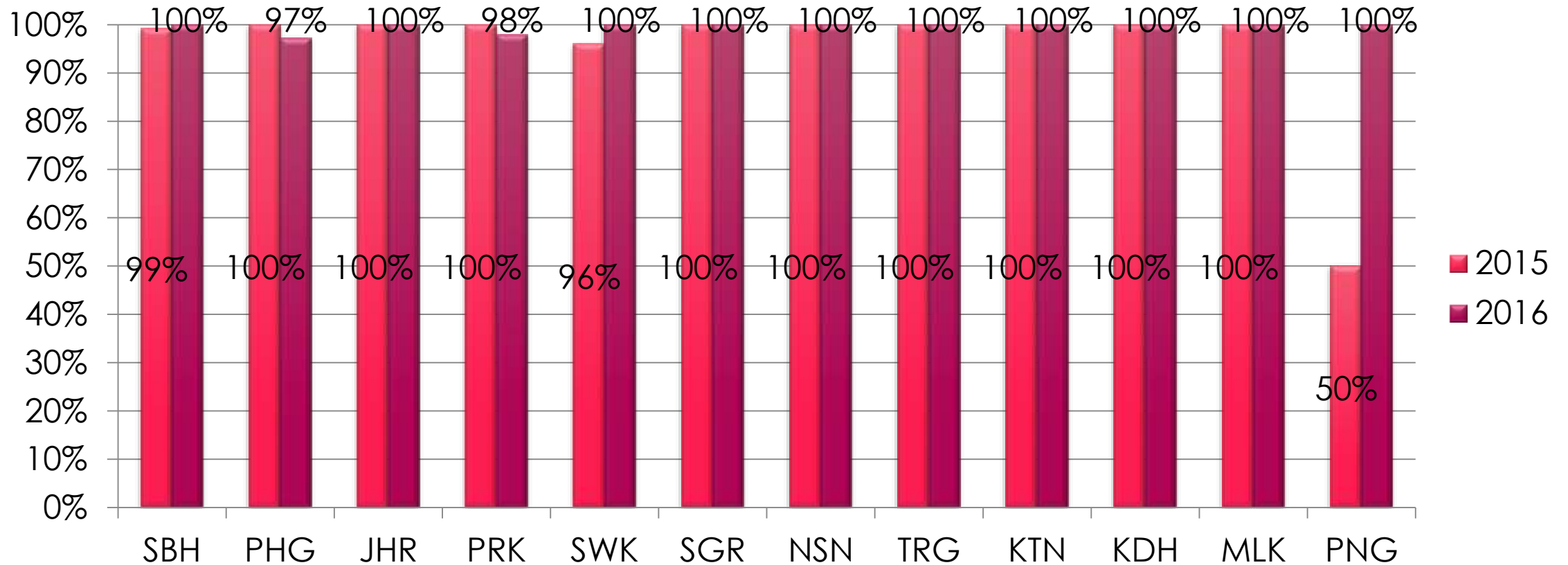
SW 305 - spent lubricating oil;

SW 306 - spent hydraulic oil: &

**SW 410 - rags, plastics, paper or filters contaminated with
scheduled wastes.**

In 2015, the overall compliance performance by the palm oil mills under the Environmental Quality (Scheduled Wastes) Regulations, 2005 was 98%.

ENVIRONMENT QUALITY (SCHEDULED WASTES) REGULATIONS 2005



ENVIRONMENT QUALITY (SCHEDULED WASTES) REGULATIONS 2005

Reg. 3

- Notification of generation of schedule wastes must be done within 30 days from date of waste generation with information provided in the Second Schedule.

Reg. 9

- Storage of scheduled wastes [use compatible containers; proper storage area; not more than 180 days; not more than 20 MT]

Reg. 10

- Labelling of scheduled wastes [Date of wastes generation; name, address & telephone no. of generator; types of waste according to the 3rd Schedule & SW Code according to the 1st Schedule]

ENVIRONMENT QUALITY (SCHEDULED WASTES) REGULATIONS 2005

Reg. 11

- Inventory of scheduled wastes [3 year inventory of SW must be kept by waste generators in accordance with the 5th Schedule]

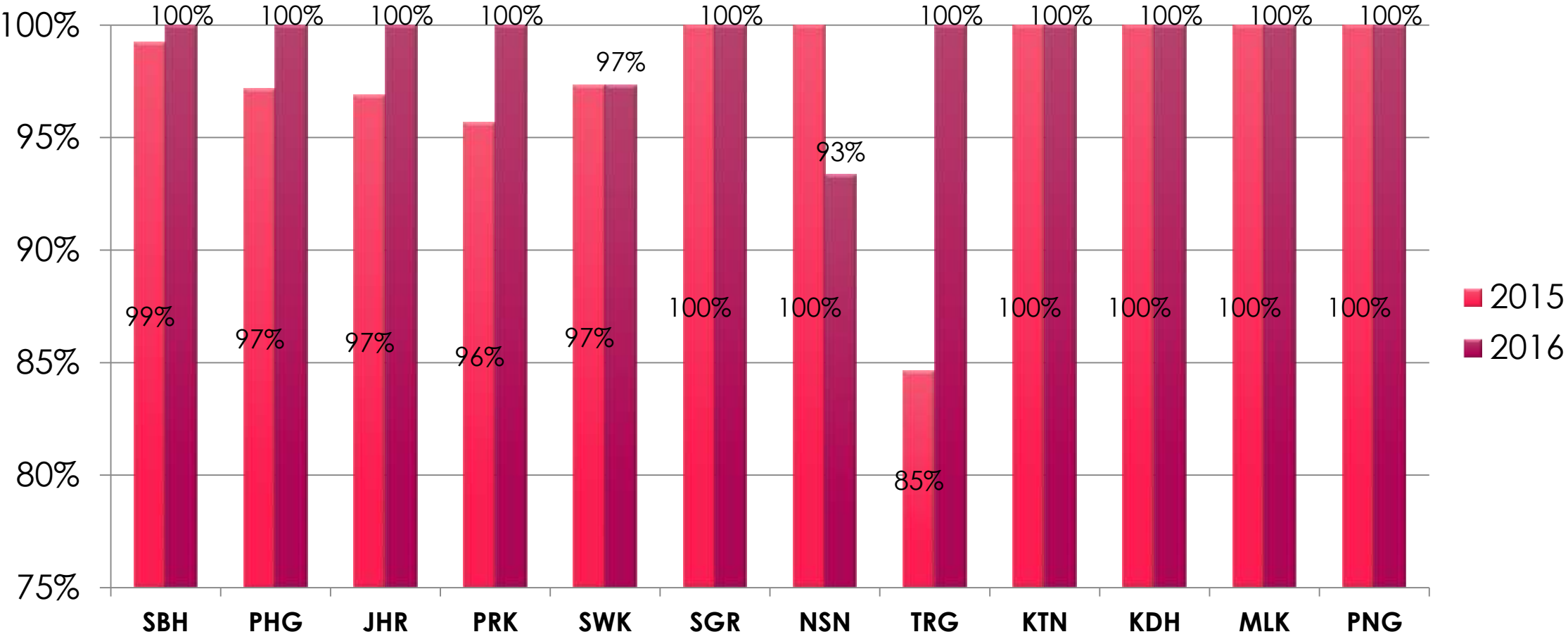
Reg. 4, Reg. 12 & Reg. 13

- Disposal of scheduled wastes shall be carried out at prescribed premises only by licensed contractors accompanied by information in accordance to the 6th Schedule.

Reg. 15

- Employees involved with scheduled waste attend training programmes.

ENVIRONMENT QUALITY (PRESCRIBED PREMISES)(CRUDE PALM OIL) REGULATIONS, 1977



Parameter	Limits According To Period of Discharges					
	1.7.1978-30.6.1979	1.7.1979-30.6.1980	1.7.1980-30.6.1981	1.7.1981-30.6.1982	1.7.1982-31.12.1983	1.1.1984 and thereafter
Biochemical Oxygen Demand (BOD) 3-day, 30°C, mg/L	5000	2000	1000	500	250	100
Chemical Oxygen Demand (COD), mg/L	10000	4000	2000	1000	-	-
Total Solids, mg/L	4000	2500	2000	1500	-	-
Suspended Solids, mg/L	1200	800	600	400	400	400
Oil and Grease, mg/L	150	100	75	50	50	50
Total Nitrogen, mg/L	200	100	75	20	300*	200*
pH	5.0-9.0	5.0-9.0	5.0-9.0	5.0-9.0	5.0-9.0	5.0-9.0
Ammoniacal-Nitrogen, mg/L	25	15	15	10	150*	150*
Temperature, °C	45	45	45	45	45	45

Table 1: Watercourse Discharge Standards for Crude Palm Oil Mills Effluent

LAND DISPOSAL STANDARDS FOR CRUDE PALM OIL MILLS EFFLUENT

- During period 1.7.1978 to 30.6.1979
 - No Limit for BOD
- After 1.7.1979
 - 5000 mg/l limit for BOD
 - the DG may impose a more stringent limit than 5000 mg/l



CURRENT STANDARD OF DISCHARGE FOR CRUDE PALM OIL MILLS EFFLUENT

The limits of effluent discharged from crude palm oil mills has been maintained since 1.1.1984

However in order to fulfill the local requirement in protecting the environment particularly the environmentally sensitive tourism industry of the states of Sabah and Sarawak, and areas above water intake points, A more stringent effluent discharge limit of below 100 mg/L has been imposed.

CRUDE PALM OIL MILLS EFFLUENT DISPOSAL IN THE STATE OF SABAH

In 2006, the state government of Sabah requested DOE to impose land disposal with BOD_3 20 ppm for all palm oil mills effluent after numerous complaints by the people and the decision of the state cabinet.

Realising this would be a burden to the industry, officers from DOE met with the millers in Sabah and also senior officers from the state government and the following conditions were agreed by the state:

FOR EXISTING CRUDE PALM OIL MILLS IN SABAH:

- a) Mills located in sensitive areas such as wildlife sanctuary; above water intake point; where there are economic activities for local folks and tourism products downstream of the discharge point, must practice land disposal with BOD <1000ppm.
- b) Mills that have received complaints and found to be justified, will be ordered to do land irrigation or other suitable methods of disposal with BOD <100ppm
- c) Mills with good track record and having large enough and suitable land for land disposal are encouraged to practice land disposal with BOD <1500ppm
- d) Mills that are not categorized in a), b), c) above and do not have large land can be allowed to discharge effluent into watercourse with condition that the standard of discharge for BOD is < 20ppm

FOR NEW CRUDE PALM OIL MILLS IN SABAH:

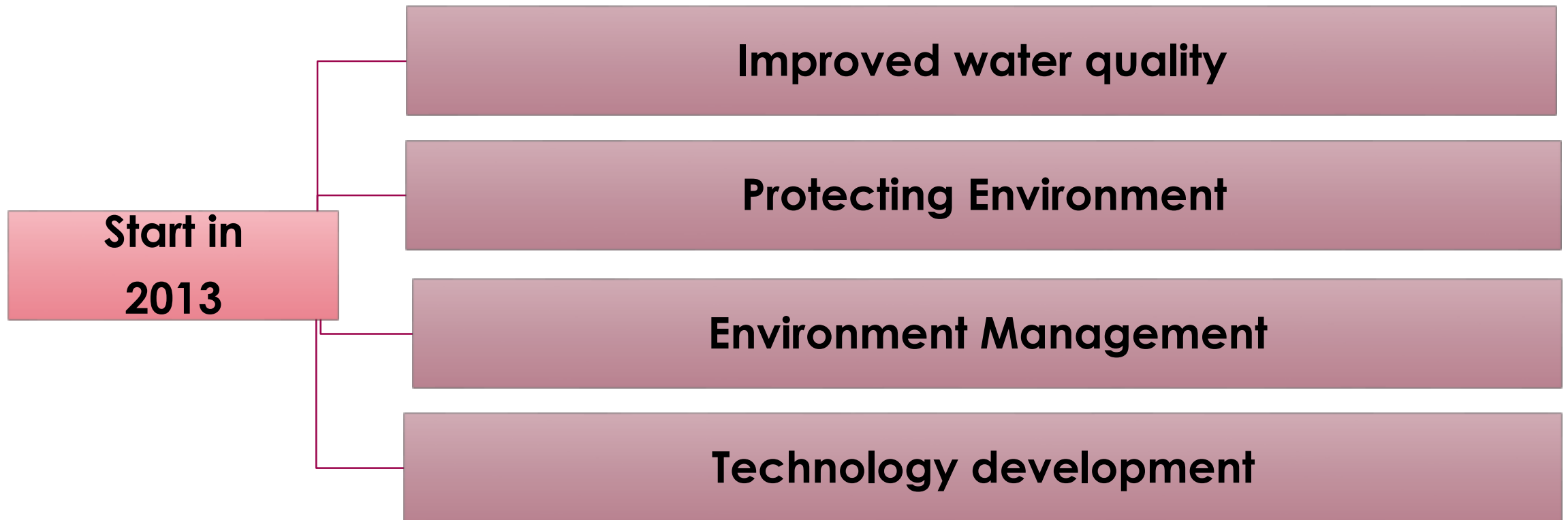
- a) to be located in the centre of the estate with at least 500m radius as buffer zone;
- b) to achieve BOD <20ppm for land application (land irrigation);
- c) watercourse discharge not allowed at all;
- d) not allow to be built near sensitive area where mill operation will have negative impact to the area. In this connection EIA can be applied to determine the suitability of the site prior to building new mills.

ITS TIME FOR NEW REGULATION!!

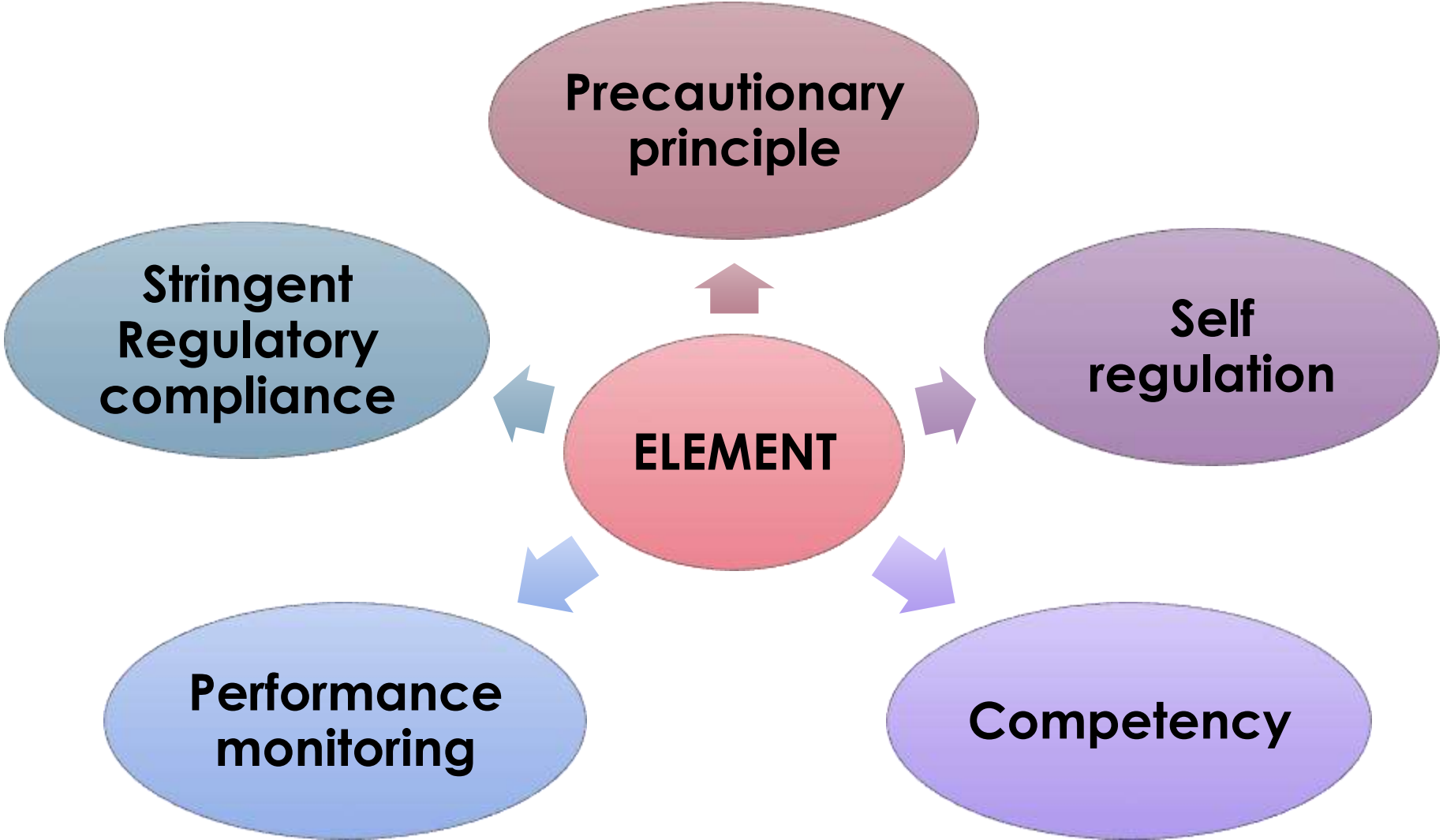
Environmental Quality (Prescribed Premises)(Crude Palm Oil)
Regulations, 201x



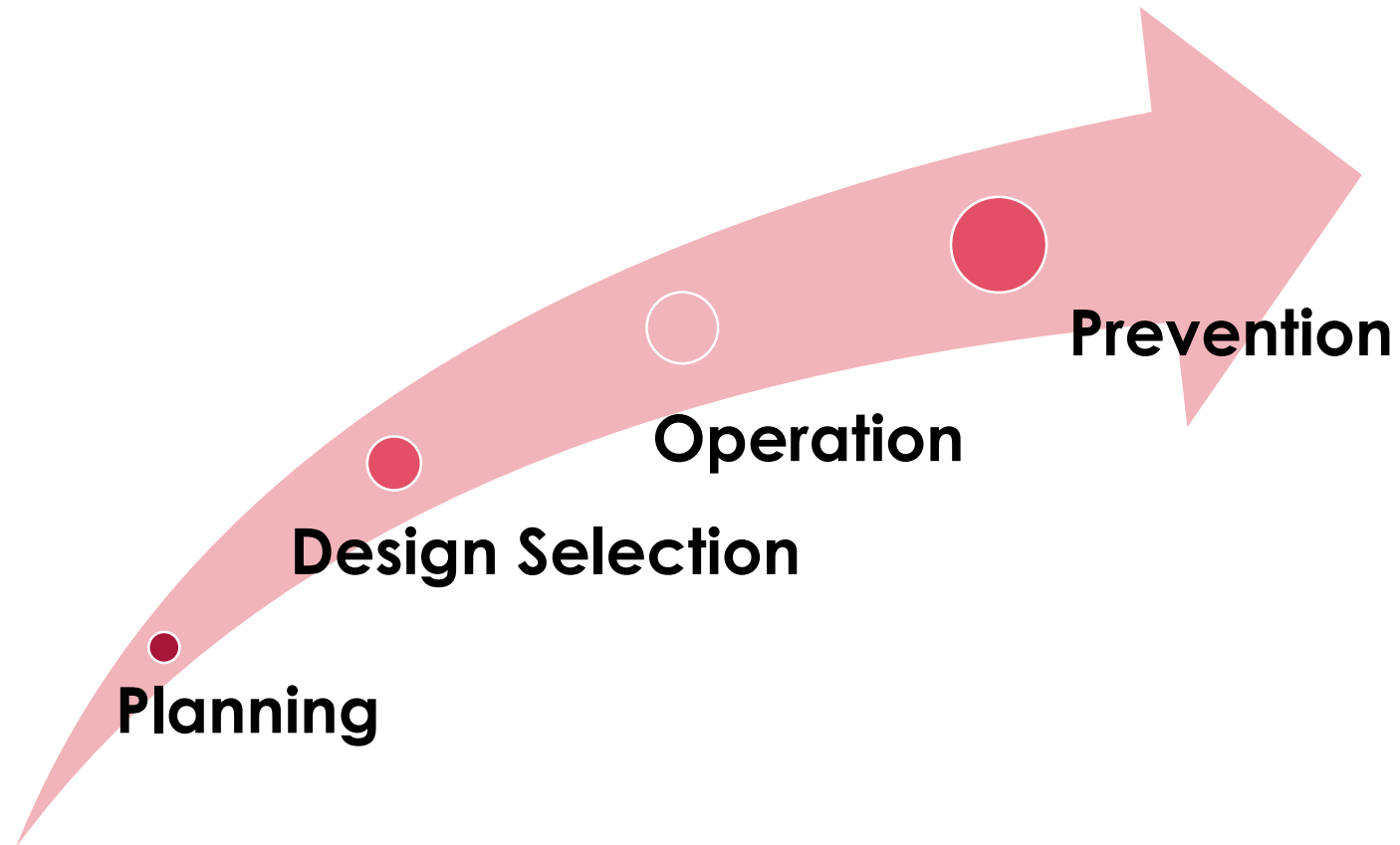
WHY WE NEED TO REVIEW?



NEW ELEMENTS APPROACH



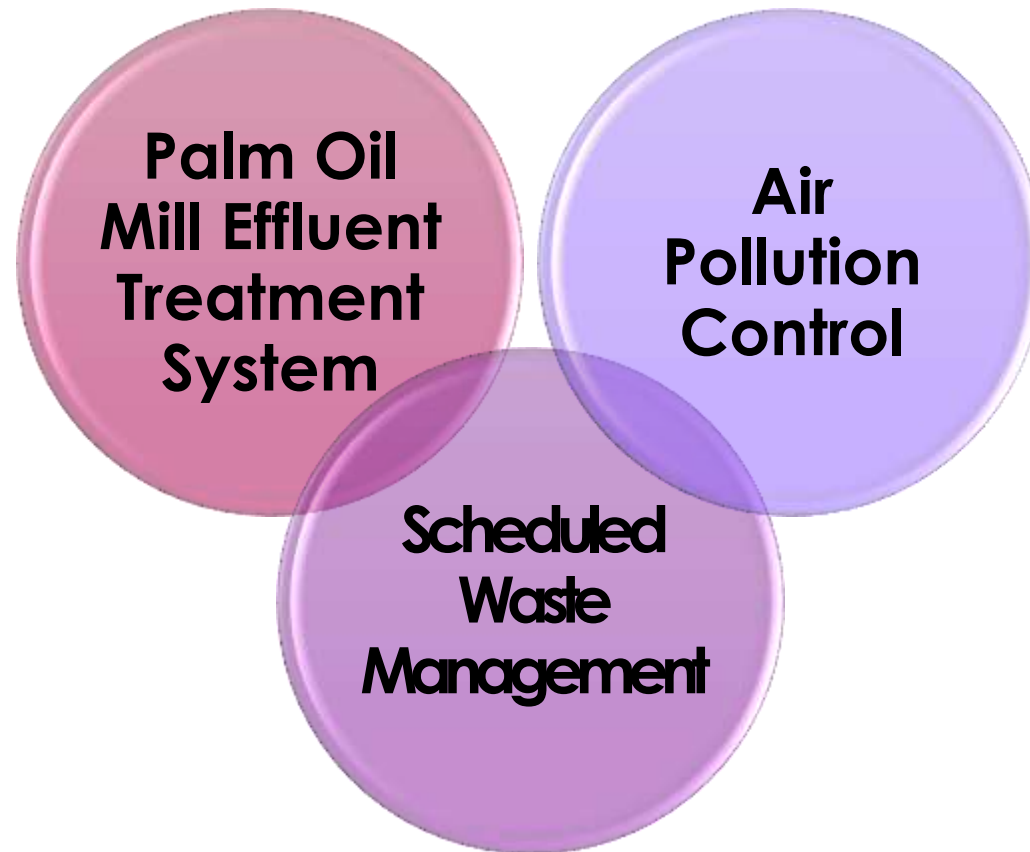
1.0 PRECAUTIONARY PRINCIPLE



2.0 SELF REGULATION



3.0 COMPETENCY



COMPETENT PERSON

CePSWAM (198 participants)

Competent	Part 1	Part 2
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39 (Full)	131 (1yr)	5	23
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CePPOME (470 participants)

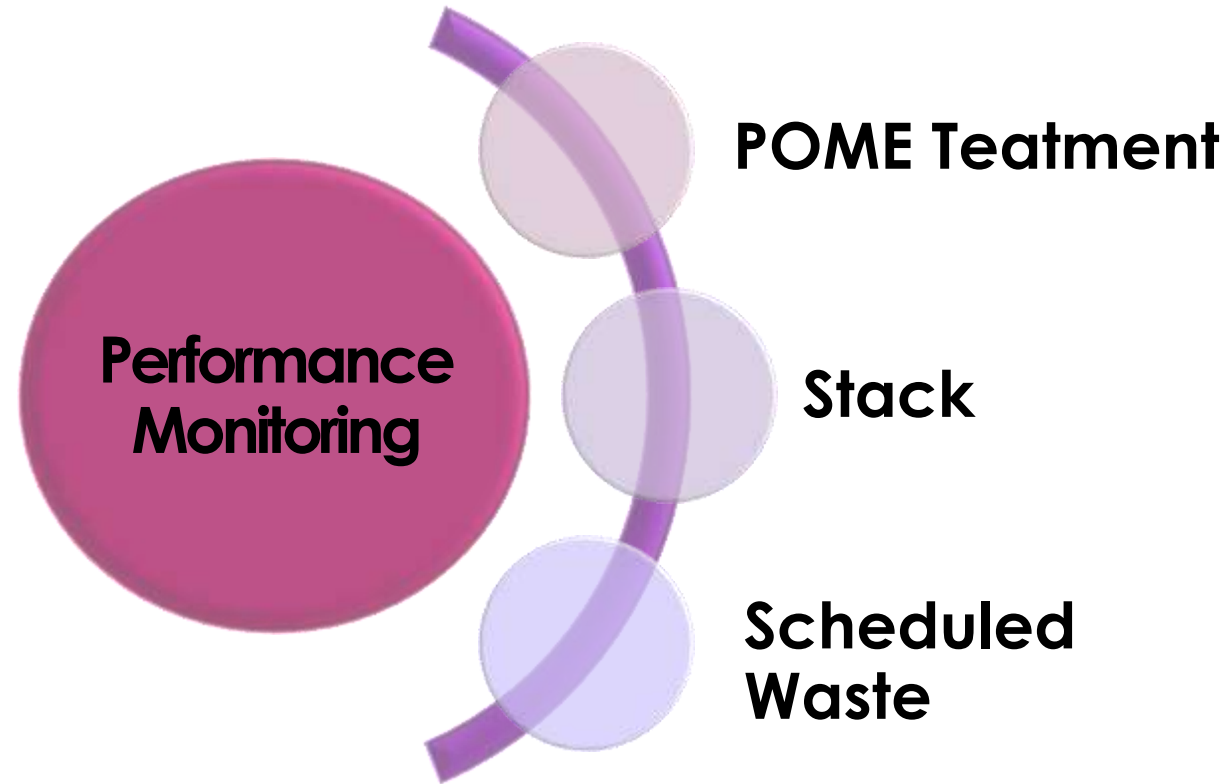
Competent	Part 1	Part 2
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42 (Full)	299 (1yr)	42	87
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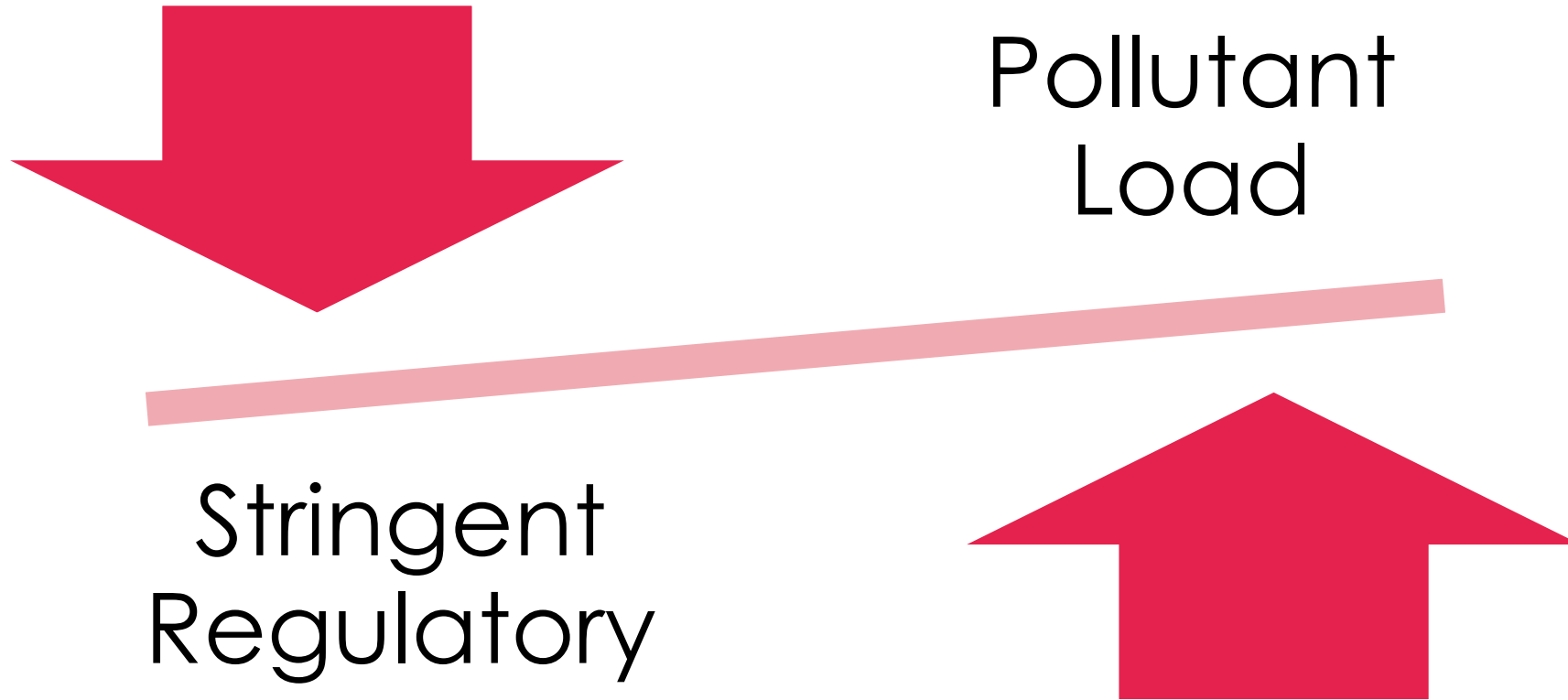
Note:

Part 1 – Passed one paper (Need to re-sit exam) } Need to re-attend the course
Part 2 – Passed both paper but not submitted field report }

4.0 PERFORMANCE MONITORING



5.0 STRINGENT REGULATORY COMPLIANCE



RECENT STATUS

2013- Draft

**A pilot study of color parameters,
Public review**

Meeting with State Agency and Stakeholders

**2015 – Present to the National Quality
Council(EQC)**

Target to gazette by 2017



CONCLUSION

Palm oil millers should be ready for new regulations.

TERIMA KASIH

THANK YOU

DANKE

MERCI

谢谢 (XIE XIE)

ありがとうございました (ARIGATOU GOZAIMASU)

감사합니다 (KAMSAHAMNIDA)

شكران جزيلاً