

Hazards Asia Pacific

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Process Safety

in the

Palm Oil Industry

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Advisor

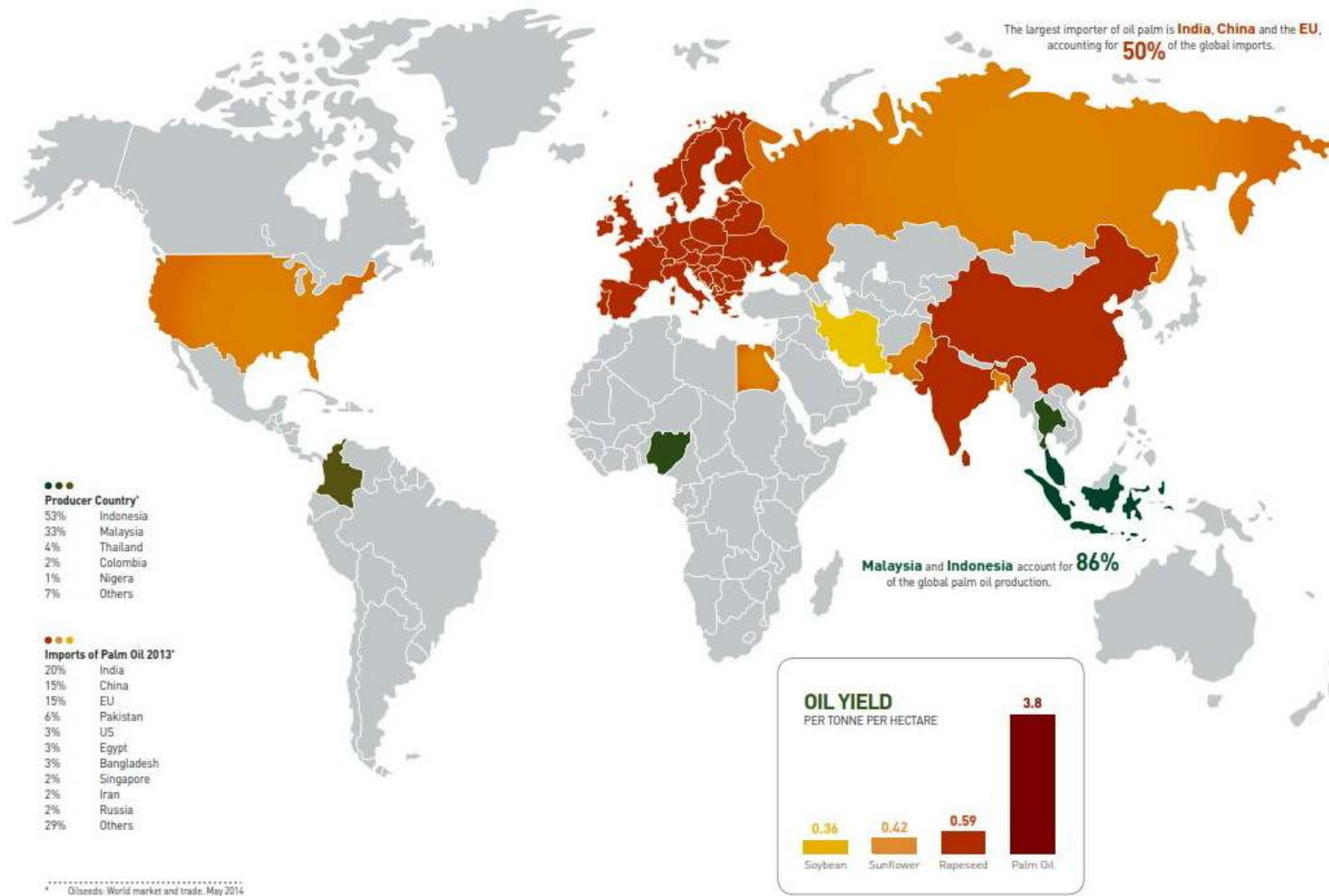
AOMG



ASEAN Oleochemical Manufacturers Group

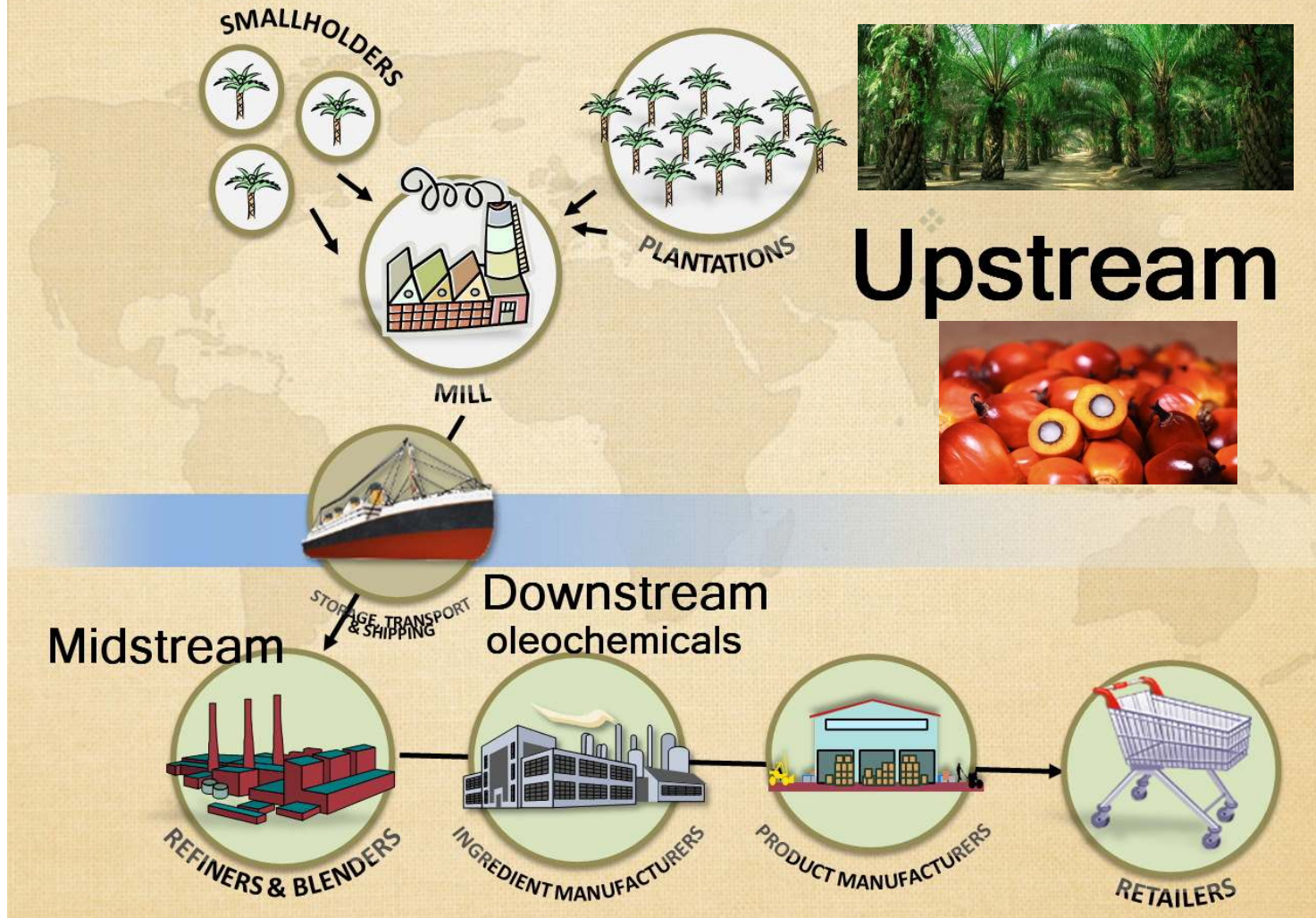
Palm Oil at a Glance

PRODUCERS AND IMPORTERS OF OIL PALM



ASEAN Oleochemical Manufacturers Group

THE PALM OIL SUPPLY CHAIN



ASEAN Oleochemical Manufacturers Group

Characteristics of Asian companies

- Information hungry
- Information hoarders
- Thrifty
- Autocratic
- Satisfy legal requirements
- Short to medium term investment
- Successful

Process Safety in AOMG

- What is AOMG?
- What makes it work?
- Areas of working together
- Process safety survey

What is AOMG?

- Established 30 years ago : MOMG 1984, POMA 1986, **AOMG 1986**, APOLIN 1996
- 14 Members from Indonesia, Malaysia & Philippines
- Represent the oleochemical industry to promote the formation of reliable and responsible production of oleochemicals without prejudicing normal competition between companies and countries.

AOMG members

Indonesia

1. PT Ecogreen
2. PT Musim Mas
3. PT Nubika Jaya
4. PT Soci Mas

Malaysia

1. Emery Oleochemicals
2. FPG Oleochemicals
3. Fatty Chemicals
4. IFFCO
5. IOI Oleochemicals
6. Natural Oleochemicals
7. Pacific Oleochemicals
8. Palm-Oleo
9. Southern Acids

Philippines

1. Chemrez

Early multinational members from Europe

- Unilever
- ICI
- Akzo Nobel
- Henkel
- P & G

What makes it work (1)?

- European legacy
- Modeled on APAG (The European Oleochemicals and Allied Products Group) a Sector Group of Cefic (European Chemical Industry Council)
- Assemble Industry Statistics viz capacity and utilisation

What makes it work (2)?

Shared concerns

eg Insurance issues

- Industry reputation low
- High premiums
- Not insurable

Improved after 1998



Stearic acid warehouse fire



1992 Bellows rupture in Johor

1993 Selangor
1994 Penang

1997
Explosion H2
generation
plant in
Selangor

What makes it work (3)?

Commitment of CEOs



K H Tan FIChemE
COO IOI Oleo



Steve Goei
CEO PT Soci Mas



G C Tan FIChemE
MD Pacific Oleo

Commitment of Seniors



E C Goh



F G Wong



Y P Low



K S Qua FIChemE

Working together : Process Safety



2011



2012



2013



2014

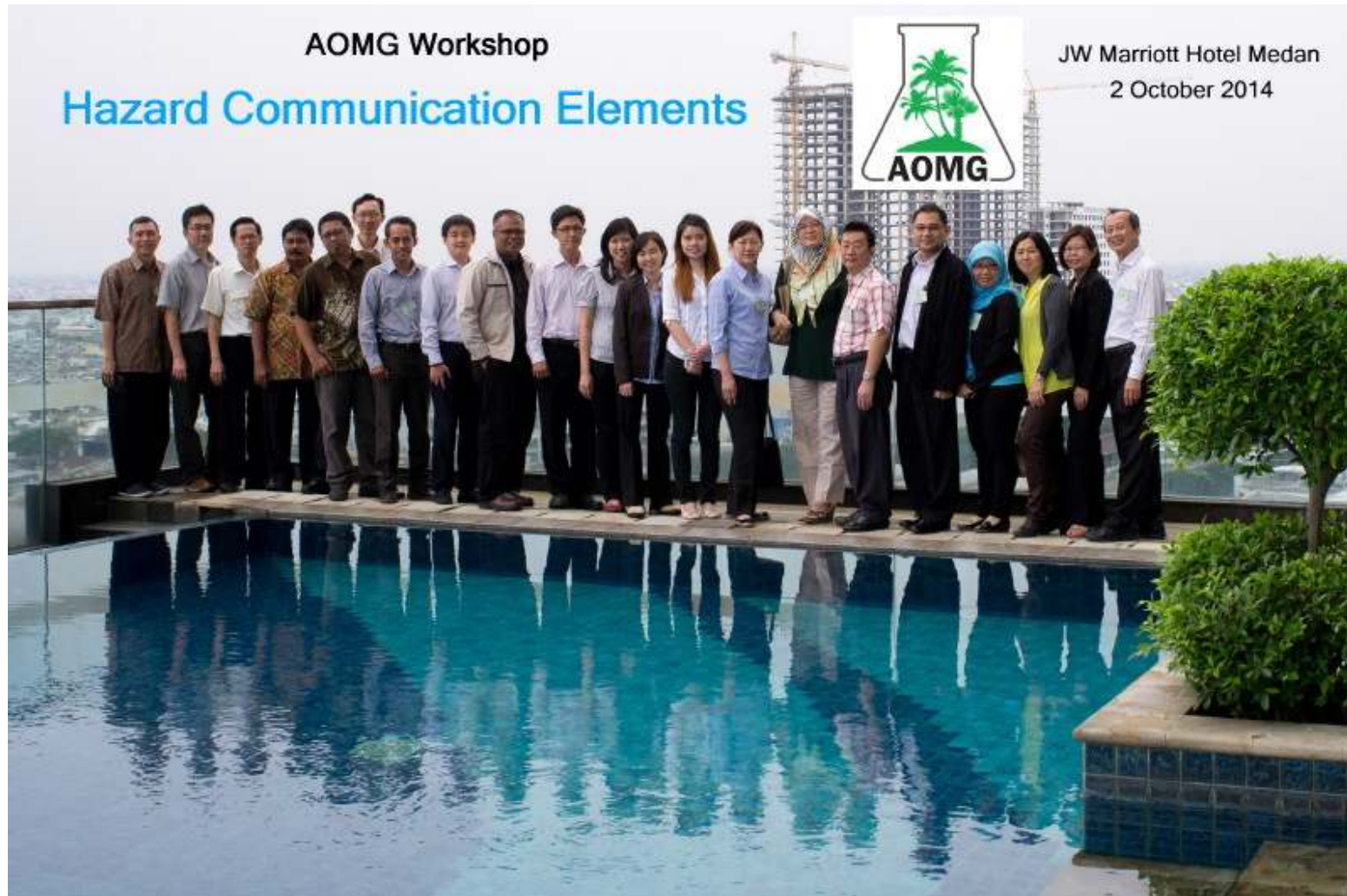
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Working together : Sustainability



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Working together : GHS



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Working
together :
Energy
Efficiency



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Survey of process safety management in member companies

AOMG Process Safety Committee



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Corporate Governance for Process Safety

OECD Guidance for Senior Leaders in
High Hazard Industries



<http://www.oecd.org/chemicalsafety/corporategovernanceforprocesssafety.htm>

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Background

- OECD document for Corporate Governance for Process Safety, June 2012
- At 2 levels viz Head of Company & Frontline
- 5 sections
 1. Leadership and Culture (8 questions)
 2. Risk Awareness (7 questions)
 3. Information (10 questions)
 4. Competence (7 questions)
 5. Action (7 questions) Total 39

SELF-ASSESSMENT QUESTIONS FOR SENIOR LEADERS

How well are you doing at managing process safety?

The following self-assessment aims to show how well your organisation is managing process safety. In line with the principles of corporate governance of process safety, the questions are intended to be answered by senior leaders: at this stage don't pass the question set to your HSE manager, but answer them yourself as best you can. Once you have done so, you should then discuss with your staff how to address any gaps, get more information, or find out the status of 'work in progress' to address known gaps. The questions are intended to be answered using 'traffic light' scores:

1 = Yes, and I can easily demonstrate this



2 = Uncertain, I would need to find out, or this is already work in progress



3 = No, I think there is a gap



Leadership and Culture



Do you have a policy on corporate governance for process safety which describes the management expectations, required commitment, and corporate activities in relation to process safety?

Do you include process safety on the agenda for all board meetings?

Do you have a designated board member responsible for process safety?

Do you and senior leaders actively work to remove any barriers to the reporting of 'bad news' up the management hierarchy, and promote an open culture for communicating process safety issues (e.g. by providing direct communications routes from the shopfloor to senior leaders, or from the national board to overseas HQ)?

Gap analysis

“Heads of companies ticked ‘yes’ for many items but frontline staff did not always agree”

No	Section	Gap %
1	Leadership & Culture	30
2	Risk Awareness	0
3	Information	20
4	Competence	5
5	Action	45

Highlights

No	Section	Observation
1	Leadership & Culture (30%)	Safety policy not well communicated? See key findings 1 & 2
3	Information (20%)	See key findings 3 MOMG members participate in CICM's RC Awards. Not winning a process safety award pushed them to focus on process safety.
5	Action (45%)	People at plant may not always be able to get their process safety recommendations or proposals approved. See key finding 2.

Keys Findings 1

- The difference between process safety and OSH (occupational safety and health) is not always clear.
- Insurance companies risk survey programmes are more geared towards process safety as their focus is on security of assets and continuity of business. People are also protected as a result.
- Formal Process Safety Management training is recommended to cover the gaps in piecemeal PSM activities and to build a good foundation over a few years for process safety.

Key Findings

1. Formal PSM Training (refer to previous slide)
2. Senior managers should pay more attention to front line production managers on their process safety concerns and formalize a channel for early 'bad news' to prevent it from becoming disastrous.
3. Management of contractors is a difficult area and is recognized by all, particularly by production managers.

Improving Process Safety in the entire Palm Oil Industry

1. Identify pockets of excellence and key persons in upstream and midstream

A safe place exists



ASEAN Oleochemical Manufacturers Group

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1. Identify pockets of excellence and key persons
2. RSPO (Roundtable on Sustainable Palm Oil) P&C (Principles & Criteria) 4.7

4.7	An occupational health and safety plan is documented, effectively communicated and implemented.	<p>Indicators: The health and safety plan shall cover the following:</p> <p>4.7.1 (M) A health and safety policy shall be in place. A health and safety plan covering all activities shall be documented and implemented, and its effectiveness monitored.</p> <p>4.7.2 (M) All operations where health and safety is an issue shall be risk assessed, and procedures and actions shall be documented and implemented to address the identified issues. All precautions attached to products shall be properly observed and applied to the workers.</p> <p>4.7.3 (M) All workers involved in the operation shall be adequately trained in safe working practices (see Criterion 4.8). Adequate and appropriate protective equipment shall be available to all workers at the place of work to cover all potentially hazardous operations, such as pesticide application, machine operations, and land preparation, harvesting and, if it is used, burning.</p>
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* (M) indicates Major Indicators



PRINCIPLE 4: USE OF APPROPRIATE BEST PRACTICES BY GROWERS AND MILLERS

NO.	PRINCIPLES AND CRITERIA	INDICATORS/GUIDANCE
		<p>4.7.4 (M) The responsible person/persons shall be identified. There shall be records of regular meetings between the responsible person/s and workers. Concerns of all parties about health, safety and welfare shall be discussed at these meetings, and any issues raised shall be recorded.</p> <p>4.7.5 Accident and emergency procedures shall exist and instructions shall be clearly understood by all workers. Accident procedures shall be available in the appropriate language of the workforce. Assigned operatives trained in First Aid should be present in both field and other operations, and first aid equipment shall be available at worksites. Records of all accidents shall be kept and periodically reviewed.</p> <p>4.7.6 All workers shall be provided with medical care, and covered by accident insurance.</p> <p>4.7.7 Occupational injuries shall be recorded using Lost Time Accident (LTA) metrics</p> <p>Specific Guidance for 4.7.7: The National Interpretation will define the metrics for LTA. For countries where there are no national interpretations, the growers will determine their own metrics.</p> <p>Guidance: Growers and millers should ensure that the workplace, machinery, equipment, transport and processes under their control are safe and without undue risk to health. Growers and millers should ensure that the chemical, physical and biological substances and agents under their control are without undue risk to health when appropriate measures are taken. All indicators apply to all workers regardless of status. The health and safety plan should also reflect guidance in ILO Convention 184 (see Annex 1).</p>

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2. RSPO (Roundtable on Sustainable Palm Oil) P&C (Principles & Criteria) 4.7 & 4.8
3. Promote the value of chemical engineers

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5. Legislation?

Process Safety in the Palm Oil Industry

Thank you – Questions?