

AFRICAN REFINERS ASSOCIATION



ARA and Fuel Specifications in Africa

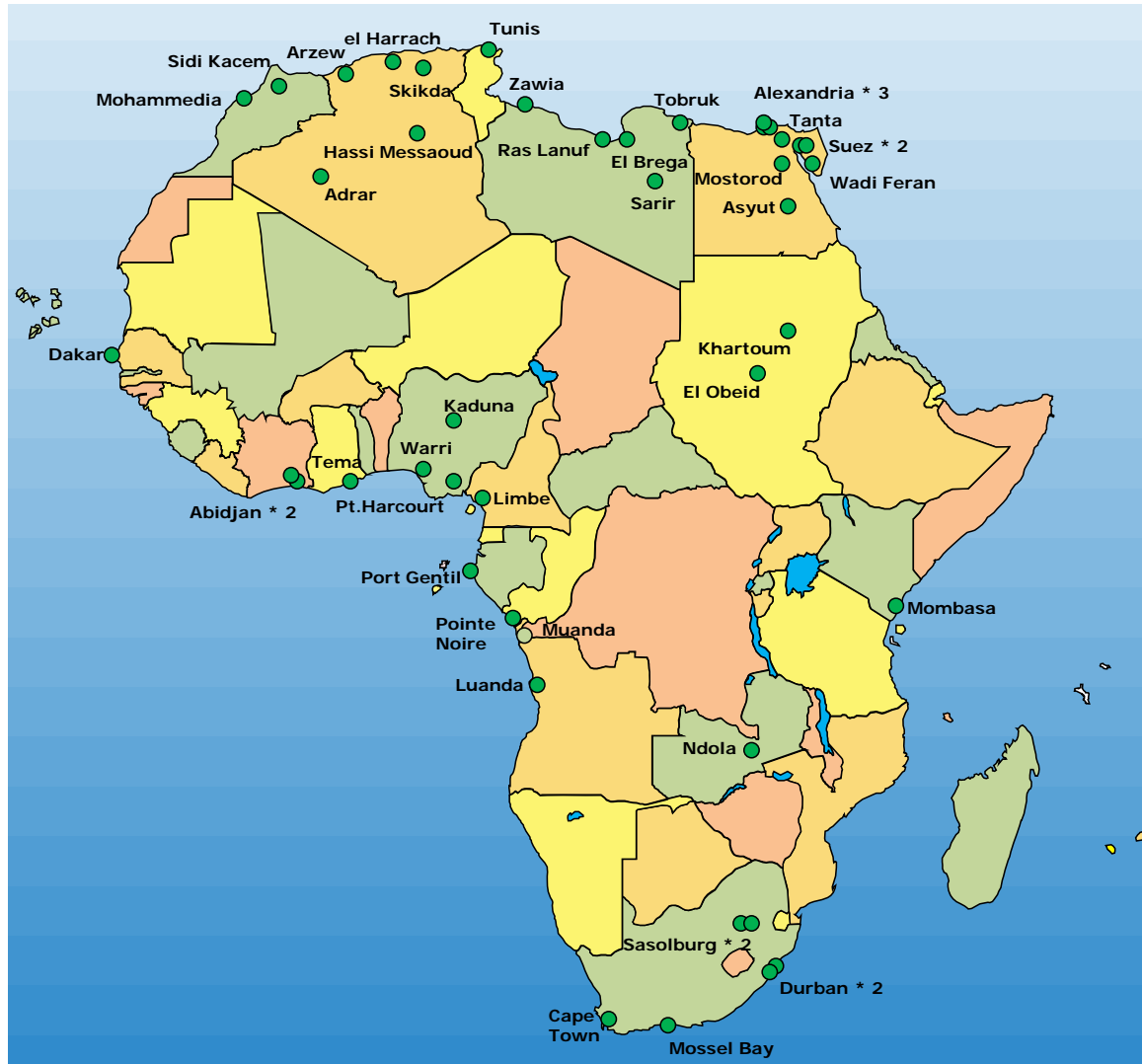
Workshop on Leaded Gasoline
Phase-Out in North Africa
Tunis, Aug 14-16, 2008



ARA – An Overview



Operating Refineries in Africa





Introduction

- Number of operating refineries: 44
 - North Africa: 22
 - Sub-Saharan Africa: 22
 - West & Central Africa: 12
 - Southern & East Africa: 10
- 13 closed in past 40 years
- Out of 17 countries with refineries, 12 have only one refinery
- Total refining capacity in Sub-Saharan Africa = 1.7* million b/d (82 million mt)
- Secondary refining capacity only 20% of total nameplate crude distillation capacity

*includes 300,000b/d of production from coal and gas



ARA's Aims and Objectives

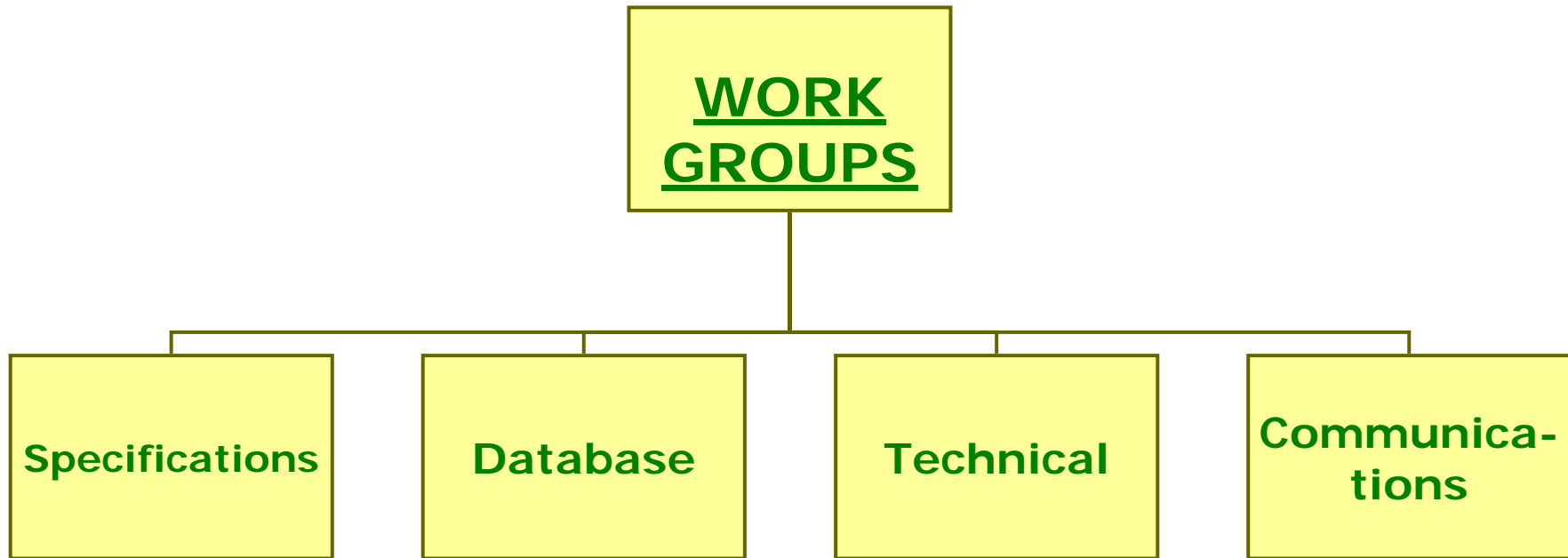
- Create a voice for African downstream;
- Take ownership of and address common issues (economic, environmental, social);
- Promote communication, co-operation and exchange of experience;
- Defend the interests of the African oil industry.



ARA Structure

- AGM
- Executive Committee:
 - 12 members – 6 permanent/6 non-permanent
 - Organises AGM
 - ARA budget
 - Monitor Workgroups
 - Manage ARA membership
- 3 or 4 Executive Committee meetings per year

ARA Structure



A new **Human Resources** Workgroup has also been created in 2008



Product Specifications: AFRI Specs

GASOLINE				
	AFRI-1	AFRI-2	AFRI-3	AFRI-4
RON, min*	91	91	91	91
MON, min	81	81	81	81
Lead content**	Unleaded	Unleaded	Unleaded	Unleaded
Sulphur content, mass %, max	0.1	0.05	0.03	0.015
Benzene content, vol %, max	to be reported	to be reported	5	1
DIESEL				
	AFRI-1	AFRI-2	AFRI-3	AFRI-4
Sulphur content, mass %, max	0.8	0.35	0.05	0.005
Density at 20°C, kg/litre (min/max)	800/890	800/890	800/890	820/880
Cetane index (calculated), min	42	45	45	45
Lubricity (HFRR @ 60°C), micron, min	to be reported	to be reported	460	460

*A higher grade of gasoline may be marketed if required

** 'Unleaded' means <0.013g of lead per litre



Product Specifications

- Specs workgroup organising meetings to develop REGIONAL plans to move up the AFRI spec scale
- Meeting the higher levels will require large investments
- Refiners need a fair, consistent “playing field” to attract investment
- Working with the WB/IMF on this is part of ARA strategy



2007-08 Achievements



Recent achievements

EXECUTIVE COMMITTEE MEETINGS

- Luanda – September 07
- Accra – December 07
- Cape Town – March 08
- Washington: Strategy meetings with WB (Oct 07 and Feb 08)
- London June 08

3rd AGM (*"AFRICAN REFINERS WEEK"*)

- Participation growing each year



Recent achievements

Events in past 12 months

- Luanda: S & E specs meeting (Sept 07)
- Dakar: Laboratory managers Colloque (Nov 07)
- Abidjan: Medical professionals Colloque (Nov 07)
- Accra: W&C Specs (Dec 07)
- Abidjan: Safety officers (Feb 08)
- Cape Town: Annual meeting (Mar 08)
- Cape Town: Communications Managers Colloque (Mar 08)
- Cape Town: Database training (Mar 08)
- London: WB SSA study Steering Committee (Apr 08)
- London: Executive committee (Jun 08)
- London: North Africa Specs meeting (Jun 08)
- London: WB SSA study Steering Committee (Jun 08)
- Lomé: Depot operations Colloque (July 08)
- Tunis: UNEP N. Africa lead removal meeting (Aug 08)



Upcoming events

- Nairobi: Executive Committee (Oct 08)
- Nairobi: Specifications Workgroup (Oct 08)
- Nairobi: WB study steering committee (Oct 08)
- Casablanca: Inspection Colloque (Oct 08)
- Algiers: Catalytic reformer Colloque (Nov 08)
- Cairo: Turbine/Pump Colloque (Jan 09)
- Cape Town: African Refiners Week (Mar 09)

+ other meetings currently being arranged



WB/ARA Sub Saharan Africa Refining study

- Refinery Sector Development study
- Previously carried out for Latin America and the Caribbean
- Integrated study on Refinery performance, product quality and health
- Aims to determine cost-effectiveness of upgrading African refineries to reduce urban air pollution and improve health
- WB tender has resulted in appointment of ICF/EnSys as consultants



2007-08 achievements

In the past 12 months over 300 representatives from Members and AM's have participate in ARA organised meetings. Results include:

- Relationships built
- Technical knowledge exchanged
- Problems shared
- Decision makers educated



Specifications Workgroup meetings 2007:

- 25 Sept 2007 – Luanda
 - Key outcome: timeframe for AFRI specs must be decided

- 5 Dec 2007 – Accra
 - Key outcome: all West & Central Africa members should commit to meeting the specifications for AFRI 1 prior to the end of 2008

- 24 June 2008 – London
 - Key outcomes: Survey of typical qualities showed that most refiners producing at AFRI 2 or 3. Final lead removal in Africa (North) to be addressed at UNEP meeting in Tunis. Dismantling of lead facilities to be expedited



2007 PROJECTS:

- Promoting regional harmonisation through Work Group meetings
- Working with UNEP to promote Lead phase-out in North Africa
- Working with IPIECA and the World Bank on a Refinery Sector development study which will include cost-benefit evaluation of specification changes



Current Efforts:

- Continued checking that reported specs are the current ones
- Each country to submit plans to move up AFRI scale, and to ask government to tighten current specifications to reflect actual refinery output (in countries with refineries)
 - What is the time period involved to achieve changes?
 - What are the likely costs/implications of specs improvements?



Next Steps:

- Seek African Union endorsement/ownership of AFRI specification process
- Develop monitoring systems to report progress up the AFRI scale
- Use technical colloques to exchange experience between members



Summary



Summary

- African Refineries face serious challenges
- Product quality must be improved to contribute to health improvement
- African refineries can become much more efficient but need a consistent level playing field
- Working with the WB/IMF etc is key to meeting many of the challenges
- ARA can help by encouraging cooperation among members