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**The Regional Forum**

**on**

**Promoting Vehicular Fuel Quality and Fuel Economy Policies for the Arab region**

**Cairo, Egypt, 24 - 25 Nov 2014**

**Forum Report**

Draft

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# Introduction

1. The “Regional forum on promoting vehicular fuel quality and fuel economy policies for the Arab region” held in Cairo, Egypt on 24-25 November 2014. The Forum aimed at discussing the current status of clean fuels and vehicles in the Arab countries, the main challenges and opportunities, and identifies key strategies needed to enhance cleaner and more efficient fuels and vehicles in the region.
2. The Forum was an active platform for sharing international and regional success stories and lessons learnt about fuel economy and fuel quality practices, leading to cleaner air. The Forum also included a dialogue on the proposed strategy for reducing fuel sulfur content and improving fuel economy in the Arab countries.
3. The Forum was inaugurated with speeches by Dr. Hossam Allam, Center for Environment and Development in the Arab Region and Europe (CEDARE); Ms. Shahira Wahbi, League of Arab States (LAS); and Mr. Fareed Bushehri, United Nations Environment Programme (UNEP)
4. More than 41 participants attended the Forum from 12 different countries, representing various governmental organizations, private sector enterprises, and non-governmental organizations in addition to representatives from international and regional organizations.

# Day 1: Fuel Quality Status and Trends in the Arab countries

## Inaugural Session

1. **Mrs. Shahira Wahby- League of Arab states (LAS),** inaugurated the session by welcoming all participants and emphasized the prime importance which the League of Arab states lays on improving the air quality of the member states through, inter alia, cleaner vehicular fuels. Ms. Wahby conveyed the wishes of H.E. Dr. Nabil EL-Araby at a successful Forum. She highlighted the fact that the Arab region currently has the world's largest crude oil reserves, and will continue to be the largest petroleum producing and exporting region in the world. The increasing number of vehicles and their growing impact on air quality urges the need to implement clean fuel strategies, while mainstreaming the need for climate change considerations. Accordingly, steps should be taken towards establishing an action plan for adopting measures directed at improving the fuel economy. Ms. Wahby emphasized the role that the League of Arab States (LAS) could play in driving this initiative forward, by leading the development of this proposed framework/action plan, in cooperation with its national and regional partners and specialized agencies. Ms. Wahby pointed out that the Forum should continue on tackling the steps necessary for the implementation of cleaner fuels and vehicles standards for sustainable air quality management within the region at the national level. Ms. Wahby concluded by highlighting the importance of obtaining commitments from governments, international and regional organizations, and public authorities to implement clean fuels and vehicles policies for sustainable air quality management within the region.
2. **Mr. Fareed Bushehri, UNEP**, conveyed the wishes of Mr. Iyad Abumoghli to have successful forum. Mr. Bushehri thanked the participants for their attendance and expressed the existence of a congruency between UNEP, LAS, and CEDARE in pursuing cleaner air and better fuel economy for the region. He explained that explained that the Partnership for Clean Fuels and Vehicles (PCFV) is part of the UNEP Transport Unit based in Nairobi, which promotes a progressive shift to transport systems and approaches to mobility that are less disruptive to the environment. Mr. Bushehri pointed out the importance of the results of this Forum for developing an action plan for Fuel economy and quality in the Arab Region.
3. **Mr. Hossam Allam, CEDARE**, conveyed the wishes of H.E. Nadia Makram Ebeid to the participants in having a result-oriented forum. Mr. Allam highlighted that this Forum is held as a follow-up on the "Policy Development Meeting for the Middle East, West Asia and North Africa on Clean Fuels and Vehicles" held in Cairo, Egypt in 2006; the "Gulf Cooperation Council Policy Development Meeting on Clean Fuels and Vehicles" held in Manama, Bahrain in 2008, and the Middle East Cleaner Fuels and Vehicles for Clean Air Policy Forum was held in Cairo, Egypt in 2010. He indicated that the current Forum is important for the efforts of reducing sulfur contents in Fuels and promoting fuel economy as these two issues the Forum will focus on.

## Session 2- Fuel Quality Overview

1. **Mr. Bert Fabian from UNEP** stepped forward to present the UNEP’s work in supporting the transition to cleaner fuels and vehicles. Mr. Fabian highlighted the UNEP’s shifting focus from promoting unleaded petrol to the introduction of low sulfur fuels and vehicle emissions standards in an integrated systems approach. He then presented the historical evolution of low sulfur fuels worldwide and Middle-eastern situation in unleaded Petrol. He delineated discrete key issues hampering the proliferation of cleaner fuels. Finally, he outlined the UNEP’s integrated approach for cleaner air comprising several concerted global programs: Partnership for Cleaner Fuels and Vehicles (PCFV), Global Fuel Economy Initiative (GFEI), Share the road (STR), and Public Transport.
2. Dr. Samir M El-Kareish from OAPEC provided a presentation about the OAPEC members’ aspiration for better fuel quality. He provided an overview of the technologies used in Fuel production. He demonstrated the development of refining capacities in the Arab world, number of refineries and their sizes. Dr. EL-Kareish also highlighted the challenges facing the Arab refining industry quality-wise and accordingly presented the amounts of investments planned for new refineries and upgrades in the period between 2012 and 2018. He presented the OAPEC’s vision for developing the fuel industry in OAPEC member countries based on a four pronged approach: integration between refineries, supporting scientific research activities, participation of foreign partners and enhancing the efficiency of existing refineries
3. **Dr. Salah Kandeel from ESCWA** provided a presentation on promoting cleaner fossils fuels in the transport sector. He ran over several indicators pointing to the adverse impacts of transport sector on air quality and energy consumption. Dr. Kandeel highlighted the policy and technological pathways for achieving the transition to cleaner fuels via improving the specifications of petrol and diesel and switching to the less polluting fossil of natural gas.
4. **Mr. Clarence Woo from the Asian clean fuels association (ACFA)** presented the key priorities of fuel quality development in Asia. Mr. Woo highlighted ACFA promotes and advances the use of cleaner automotive fuels based on principles of sound science, cost efficiency and sustainability of the environment. He stressed on health concerns make emission standards an important factor to governments around the world. Mr. Woo presented the plans, aspirations and milestones of Malaysia, Singapore, Vietnam and China for switching to cleaner fuels in the short-term future. Mr. Woo stressed on the relation between octane number enhancement and fuel efficiency. Mr. Woo concluded by the need of commitment from countries and governments to commit to better fuel standards.
5. **Ms. Huiming Li from Stratas advisors- a Hart energy company** outlined the worldwide regulatory areas of focus with respect to fuel quality: Fuel sulfur, octance & cetane, RVP, density and emissions standards. For petrol, she presented pertinent facts regarding demand, lead phase-out efforts, maximum sulfur levels, and prospective reductions in gasoline sulfur. She also showed the different market shares for petrol’s octane grades in key countries and region as far as petrol consumption is concerned. Ms. Li presented the global diesel quality trends and future outlook. She highlighted the global bio-fuel and alternative fuel quality and stressed that the Middle East and Africa lack standards of CNG and LPG. Ms. Li concluded by laying the status of both petrol and diesel vehicles emissions standards around the world and the prospective developments.

## Session 3- Arab strategy for sulfur reduction

1. Mr. Medhat Youssef from CEDARE, went ahead and presented CEDARE’S roadmap for sulfur reduction in fossil fuels. He ran through the technologies utilized by different refineries in the LAS countries. CEDARE’s roadmap for fuel quality improvement takes its point of departure from the present technological level in the LAS region.

## Session 4- Countries’ discussions

1. This session included discussions by country representatives concerning their practices and concerns for the development of fuel quality and economy. **Dr. Mona Kamal, from the Egyptian ministry of environment**, highlighted the importance of non-motorized transport such as bicycles, walking, biking and walking lanes interconnections with metro networks. She pointed out that this mode of transport requires serious modifications to pavements and the creation of safe lanes for bicycles. Dr. Kamal announced that two projects are under implementation to construct 14 km biking lanes in the Fayoum and Shbien El-Koum cities. She reiterated CEDARE’s roadmap recommendation about using subsidies in upgrading refineries.
2. **Eng. Sief Abdullah, from Yemen**, highlighted that after a prime-ministerial decree in 2012 most of petrol marketed in Yemen is unleaded since it is imported for the most part, except for the products of two refineries. He pointed out that there are two future projects for the construction of more modern refineries. Eng. Abdullah mentioned that there is an orientation in Yemen at present to rely more on natural gas for transport, capitalizing on the existing N.G production capacity.
3. **Mr. Mohamed Konna from LAS** described the procedures for adopting the roadmap by the council of the Arab ministers of the environment. He indicated that the ministries of the environment would review the Strategy to provide their comments. The Strategy should be updated with the comments before submittal to the Joint Committee for Environment and Development in the Arab Region, the technical arm of CAMRE, to prepare it for submittal to the Arab council of environmental ministries for approval after which it is moved to the social and economic committee for ratification. Finally it is presented to the Arab Summit for adoption.
4. Mr. Fareed Boushiery from UNEP recommended that attending representatives should coordinate the consultations with the relevant entities in their countries since the study involves several ministries not just the environmental one.
5. The meeting concluded with emphasizing the need to proliferate the roadmap across different institutions in the LAS countries, and the need to ensure that it reaches top environmental and energy officials.

# Day 2 Fuel economy status and trends in the Arab countries

## Session 5- Challenges and opportunities for Fuel Economy

1. **Mr. Ahmad El-Dorghamy from CEDARE** introduced Fuel economy concepts to the participants. Mr. EL-Dorghamy highlighted the rate of vehicles ownership between different countries. He discussed the role of fuel economy within the sustainable transportation sector and process to accelerate the countries’ transportation strategies toward a more sustainable transportation means. He concluded by the importance of utilizing means to have more efficient fuel consumption patterns.
2. **Mr. Bert Fabian from UNEP** introduced the global fuel economy initiative (GFEI) and through a comprehensive presentation discussed its objectives, its role as well as the solutions and tools it developed for addressing the need to improve fuel economy. He presented the history of the GFEI and the role UNEP is playing in addressing the issue, especially in low and middle-income countries that have almost all the growth in LDVs sales. Mr. Fabin highlighted Fuel economy improvements targets set by GFEI that would have the effect of leveling out co2 emissions despite the tripling of vehicles fleet. He explained that Fuel economy improvements are achieved through changing vehicle types and better maintenance, improved vehicle technologies and eco-driving.
3. Mr. Fabin stressed the potential of 25% to 50% improvement in fuel economy relative to 2010 through improved engine efficiencies lighter weights and hybridization. He then presented figures showing that fuel economy pays off; leaving alone the macro-level savings accrued by national economies. Finally he concluded by GFEI’s baseline setting tool and a tool for assessing the impacts of the host of policies mooted by the GFEI for improving fuel economy.
4. **Ahmad El-Dorghamy and Amr El-Abyad** then presented the fuel economy case studies prepared by CEDARE for each of Tunisia, Morocco, and Bahrain.

## Session 6- Countries interventions for national fuel economy policies

1. **Mr. Abdellah Sbargoud from the Algerian ministry of the environment** explained the Algerian situation with cleaner fuels and air. He highlighted that during 1999 there were 48 unleaded petrol stations whereas in 2011 they increased to 870 unleaded ones, with unleaded production capacity of 12 tons. Mr. Sbargoud pointed out that approximately 5 million vehicles are available in Algeria of which 25% are found in the city of Algiers. Until 2007 they were able to import vehicles no older than three years when an executive decree was enacted banning the import of used vehicles. He indicated that Algeria introduced incentives for vehicles utilizing natural gas: fuel and road tax breaks, in addition regulations require to have regular emission inspection. Mr. Sbaragoud concluded by indicating that Algeria adopts a gradual approach in implementing measures and policies for cleaner fuels and vehicles. The approach employs a mix of economic incentives and a strict enforcement ensuring deterrence against violators.
2. The Participants discussed the way forward where Mr. Konna from LAS described again the process the different steps needed to have the strategy adopted by the Council of the Arab ministers responsible for the environment. In addition, he highlighted that the council of Arab transport ministers already have a strategy for sustainable transportation.
3. Participants have also discussed the process to have their national fuel economy case study as the four countries that have been implemented. It has been explained that the countries need to send the request to UNEP for Fuel economy study.
4. The participants discussed the need to have an Arab refineries network similar to the African refineries network. OAPEC representative declared that there is an annual meeting organized by OAPEC for the refineries. It was highlighted that not all the Arab countries are currently members of OAPEC.
5. **Ms. Mahdi from the Iraqi ministry of environment** highlighted the need to have a Fuel economy strategy for the Arab countries. The participants discussed the difficulties for obtaining the data for vehicles and there is a need to update the list of focal points in the ministry of environment. Also it is important to identify focal points in the ministries of
6. **Mr. Bert Fabian from UNEP** shared the Asian experience where there is an overarching umbrella of different ministries to discuss and coordinate an umbrella strategy for transportation. For fuel economy ministry of trade and finance are the main competent authorities
7. **Mr. EL-Sayed from Egyptian ministry of environment** described the plans to enhance the public transportation and thus the positive impact of fuel economy of Egypt.

## Recommendations

1. Recommendations for LAS
   1. To start the process for adopting the strategy by the Council of the Arab Ministries Responsible for the environment
   2. To distribute the Arab strategy for reducing sulfur contents to all the Arab countries to provide their comments and integrate it in the Final document.
   3. To update the current focal points of the Ministries of environment and request focal points from the Ministries of petroleum and Transportation to cooperate in the Fuel Economy and Quality in the Arab countries
   4. To establish cooperation with the Arab council for the ministries of interior for providing vehicles’ information needed for Fuel economy
2. Recommendation for the Countries
   1. Countries that would like to have their national fuel economy study to send a request to LAS and UNEP.
   2. Ministries of environment would liaise with relevant national institutions concerning fuel economy and quality.
3. Recommendations for UNEP
   1. To continue in providing support for the Arab countries to enhance their fuel quality and economy.
4. Recommendation for OAPEC
   1. To be responsible for handling cooperation with all Arab Refineries as a base for Arab Refineries Network.
5. Recommendations for CEDARE
   1. To update the strategy and case studies by the feedback received from the countries
   2. To continue in providing technical support to LAS during the adoption process of the Arab fuel quality strategy for reducing sulfur content in fuel.
   3. To continue cooperation with LAS, UNEP, and OAPEC for identifying future activities for the Arab countries to enhance their Fuel economy and quality status.

# Annex 1- List of Participants

**Algeria:**

Mr. Abdellah Sbargoud

Head of Communication &External Relations

National Environment & Sustainable Development Observatory

**Bahrain:**

Ms. Hanan Haidar

Acting Head of Pollution Control Section

Supreme Council for Environment

**Djibouti:**

Mr. Aden Hassan Elmi

Ministry Representative.

Ministry of Environment

**Egypt:**

Ms. Mona Ahmed Kamal

Head of Environmental Quality Department

Ministry of Environmental Affairs

Mr. Ayman Mohamed Sheta

Director of the General Administration of Vehicle Exhaust

Ministry of Environmental Affairs

Eng. Moataz Mohamed Ebady

Environmental Action Plan Manager

Ministry of Environmental Affairs

Mr. Islam Abd El-Mohsen Hassan

Environmental Researcher

The Ministry of Environmental Affairs

Ms. Maram Hussain El-Wakeel

Environmental Quality Officer

The Ministry of Environmental Affairs

Ms. Halah Mohamed Salaam

Director of Engineering Affairs

MIDOR Petroleum Company.

Mr. Emad Fathy A. Kader

QA / SE Manager

Taqa Company

**Iraq:**

Mr. Fadhil Abbas Ahmed

Expert Director of Sustainable Development

Ministry of Environment

Ms. Suhad Khaleel Mahdi

Technical Manager

Ministry of Environment

Ms. Sally Sabry

Third Secretary, Permanent Representation of Republic of Iraq with Arabic League.

**Lebanon:**

Ms. Hala El-Mounajjed

Environmental Specialist

Ministry of the Environment

**Mauritania:**

Mr. Sidaty Rahil

Technical Advisor in charge of the Green Environment

The Ministry of the Environment & Sustainable Development

**Palestine:**

Eng. Amjad A. M. Kharraz

Director of Environment Quality Authority / Nablus Regional Office.

Environment Quality Authority.

**Saudi Arabia:**

Mr. Majed Mohamed Al-Zahrani

Planning Engineer

Ministry of Transport

Mr. Abdullah J. Al-Madhy

MTBE Business Director

SABIC

**Sudan:**

Mr. Ali Mohamed Alamin

Director of Environmental Control

Ministry of Environment & Forests and Urban Development

**Tunisia**

Mr. Ezz El-Deen El-Ties

Advisor

Tunisian Embassy

**Yemen:**

Mr. Faisal Abdullah Saif

General Manager of Planning & International Cooperation Department

Ministry of Water & Environment

**International & Regional Organizations:**

**Arab Center for the Studies of Arid Zones & Dry Lands (ACSAD):**

Mr. Hossam Ali Ali Metwaly

Director of Plant Resources Department

**Arabic Organization for Industrial Development and Mining**

Mr. Saleh El-Gaghdaf

Minister-Director of the Regional Office

Ms. Tahany Metwaly

Technical Affairs Regional Office

**Asian Clean Fuel Association (ACFA):**

Mr. Clarence Woo

Executive Director

**Centre for Environment and Development for the Arab Region and Europe (CEDARE):**

Dr. Hossam Allam

Regional Programme Manager

Mr. Medhat Yousef

Advisor

Eng. Amr Al-Abyad

Energy & Environment Expert

Eng. Ahmed El Dorghamy

Energy & Environment Expert

Ms. Aya Farag

Administration & Finance Officer

**League of Arab States:**

Ms. Shahira Wahbi

Director of Multilateral Relations, Department of the Environment, Housing & Water resources and Sustainable Development

Mr. Mohamed Konna

Department of the Environment, Housing & Water resources and Sustainable Development

**Organization of Arab Petroleum Exporting Countries (OAPEC):**

Mr. Samir M El-Kareish

Director of Technical Affairs Department

**Stratas Advisors:**

Ms. Huiming Li

Director

**The General Secretariat Council of the Arab Ministers of Interior**

Mr. Marwan Mostafa Mohamed

Director of the Arab Security Information

Mr. Wael Mohamed Al Shamy

Official Media and Relations

Arab Security Information

**United Arab Investors**

Mr. Gamal Bayoumy

The Secretary-General

Mr. Abd El-Rahman Awad

Board Member

**United Nations Economics & Social Commission for Western Asia (ESCWA):**

Mr. Salah Kandeel

Energy Sector

**United Nations Environment Programme**

Mr. Fareed Busheri

Regional Resource Efficiency Officer

Mr. Bert Fabian

Programme Officer

# Annex 2- Agenda

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| Day 1: Fuel Quality Status and Trends in the Arab Countries | |
| 10:00-10:30 | **Official Opening and Welcome**  League of Arab States (LAS) – Welcoming speech  Centre for Environment & Development for the Arab Region and Europe (CEDARE)  United Nations Environment Programme (UNEP) |
| **Presentation of the Agenda/Round Table**  Objectives and Expected outcomes |
| **Fuel Quality Overview** | |
| 10:30-11:45 | *Global Overview on Cleaner Fuels and Vehicles, UNEP*  *Development of Cleaner Fuel Production in Arab Refineries, Organization of Arab Petroleum Exporting Countries (OAPEC)*  *Promoting Cleaner Fossil Fuels in the Transport Sector in the Arab Region, United Nations Economic and Social Commission for West Asia (ESCWA)* |
| 11:45 – 12:15 | *Coffee break* |
| *12:15 -12:45* | *Case study on Fuel Quality Roadmap for Asia, Asian Clean Fuels Association (ACFA)*  *Political and Market Conditions Delay Uniform Approach for Fuel Quality, Hart Energy* |
| **Arab Strategy For Sulphur Reduction** | |
| *12:45 – 1:30* | *Proposed Arab Region Strategy for Sulphur Reduction in Fuel, CEDARE* |
| 1:30 – 2:00 | ***Coffee Break*** |
| **Countries’ Discussions** | |
| 2:00 – 3:00 | Countries’ Interventions and Recommendations or National Fuel Quality and Proposed Arab Strategy |
| 3:00 – 3:30 | Re-cap of the day and closing |
| 3:30 – 5:00 | ***Lunch*** |

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| Day 2: Fuel Economy Status and Trends in the Arab Countries | |
| 10:00 - 10:15 | **Summary of Day 1, Agenda for Day 2** |
| **Challenges and Opportunities for Fuel Economy** | |
| 10:15 - 11:45 | Introduction to Fuel Economy, CEDARE  **The Global Fuel Economy Initiative: a global approach to energy efficient vehicles**  The GFEI Tools: An overview of the tools available to policymakers, *UNEP* |
| 11:45 – 12:15 | *Coffee break* |
| 12:15 – 1:30 | **Fuel economy Case Studies in the Arab Region**  Tunisia, Morocco, Bahrain, and Egypt |
| 13:30 - 14:00 | *Coffee break* |
| Countries’ Interventions for National Fuel Economy | |
| 2:00 – 3:00 | Next Steps for Arab countries on fuel economy  Identify concrete steps, recommendations and way forward  **Discussion**   * *Policy & programme implications for fuel economy (e.g vehicle standards)* * *National level follow-up* * *Financing options* * *Regional initiatives needed to support national efforts to clean up road transport* * *Regional recommendations* |
| 3:00 – 3:30 | **Wrap-up and Next Steps**  Objective To agree on the plans for a network of contacts, and to establish what else the Partnership on Clean Fuels and Vehicles (PCFV) and the Global Fuel Economy Initiative (GFEI) and other attendees could do to help take this issue forward in Arab countries |
| 3:30 – 5:00 | *Lunch* |