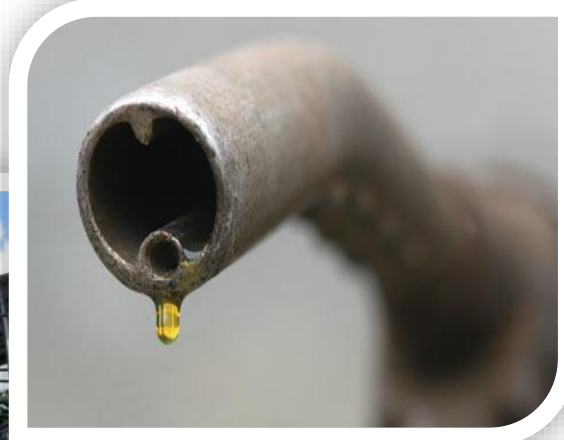




Republic of Ghana

# Improving African Fuel Standards for Sustained Economic Growth

by  
*Alpha Welbeck*



# Outline

- Introduction
- General Information on Africa
- Fuel Standards in Africa
- Emissions Vs. Fuel Standards in Africa
  - ❖ Where do we (Africa) stand now?
  - ❖ Justification for the move (Impact on Economic Growth)
  - ❖ What are the causes of the delay?
- Way Forward
- Conclusion



# Introduction

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- Global upsurge in the call for environmentally friendly policies.
- Development of carbon emission policies – Western World.
- Africa is gradually developing environmentally friendly policies.
- Advocacy for Africa to switch to cleaner fuels.



# General Information on Africa

**World's second largest continent**

**Population of over 1.2 billion people**

**GDP growth of about 3% (2015 estimates)**



**Over 130 billion barrels of oil reserves (2010 estimates)**

**Over 500 trillion cubic feet of gas reserves (2010 estimates)**

**Has some of the world's fastest growing economies**

# General Information on Africa - Fastest Growing Economies

## Tanzania

2015 nominal  
GDP:\$46.2billion  
2016 proj growth rate:6.9%

## Kenya

2015 nominal  
GDP:\$29.7billion  
2016 proj growth rate:8.5%

## Ivory Coast

2015 nominal  
GDP:\$29.7billion  
2016 proj growth rate:8.5%



## Senegal

2015 nominal  
GDP:\$14billion  
2016 proj growth rate:6.6%

## Rwanda

2015 nominal GDP:\$8.5billion  
2016 proj growth rate:6.3%

## Djibouti

2015 nominal  
GDP:\$1.7billion  
2016 proj growth rate:6.5%

# Fuel Standards in Africa

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- Some countries differentiate their RON specifications between
  - ❖ Leaded and unleaded petrol (e.g Algeria)
  - ❖ Metal Free and Metal Containing Petrol (e.g South Africa)

# Fuel Standards in Africa

| No. | Country      | Research Octane No. for Petrol |         | Max Sulphur in Diesel (ppm) |
|-----|--------------|--------------------------------|---------|-----------------------------|
|     |              | Regular                        | Premium |                             |
| 1   | Algeria      | 89/96                          | 98      | 1,500                       |
| 2   | Angola       | 93/95                          |         | 1,500                       |
| 3   | Egypt        | 80/90/92/95                    |         | 10,000                      |
| 4   | Ghana        | 91                             | 95      | 3,000                       |
| 5   | Kenya        | 93                             |         | 50                          |
| 6   | Libya        | 95                             |         | 1,000                       |
| 7   | Morocco      | 95                             |         | 50                          |
| 8   | Nigeria      | 91                             |         | 3,000                       |
| 9   | Senegal      | 87/91                          |         | 5,000                       |
| 10  | South Africa | 91/93/95                       |         | 500/50                      |
| 11  | Sudan        | 90                             |         | 500                         |
| 12  | Tunisia      | 96                             |         | 3,000                       |



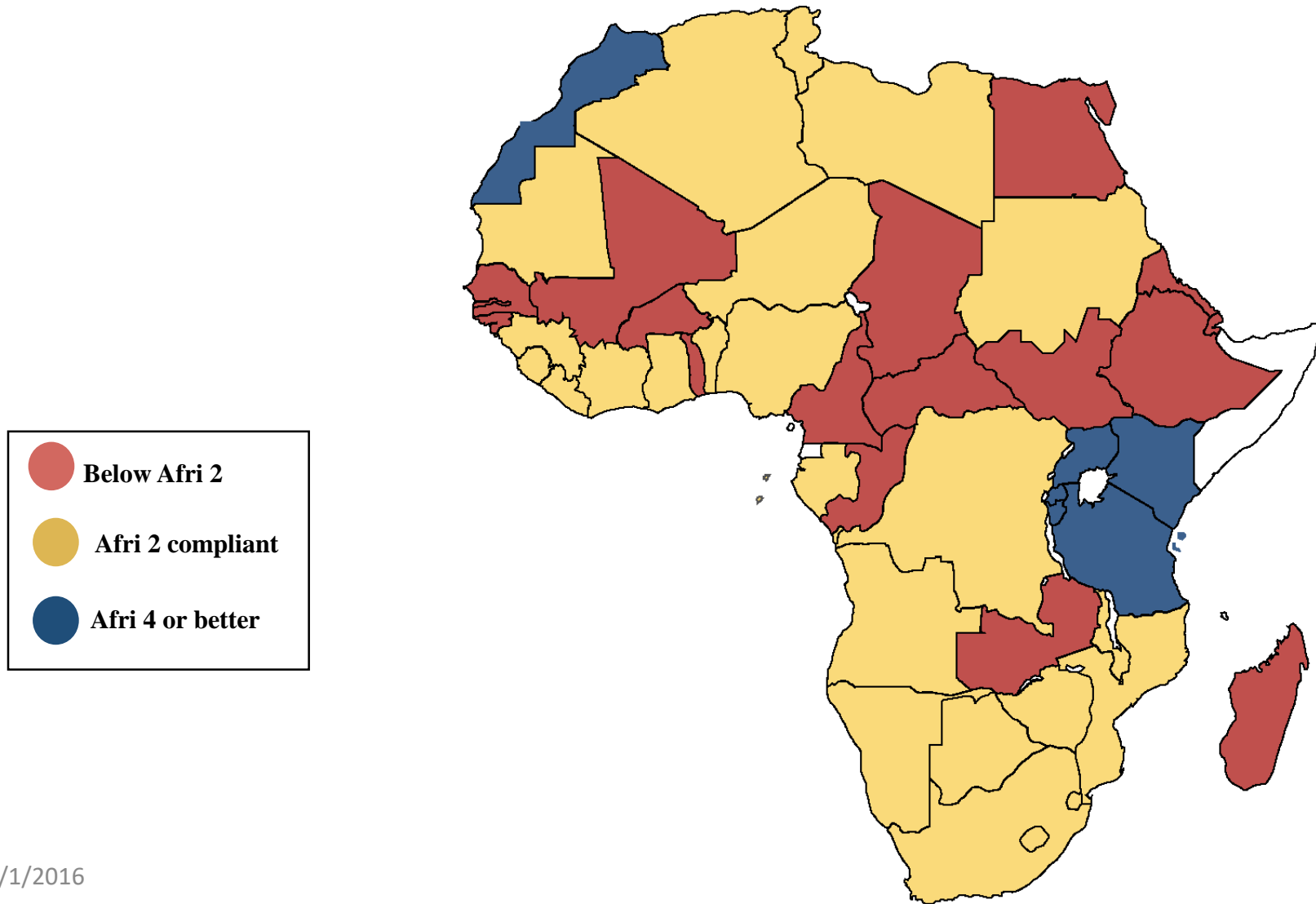
# Emissions Vs. Fuel Standards in Africa

| No. | Country                     | Info on Emission Standards                     |
|-----|-----------------------------|--|
| 1   | Morocco                     | Emission Standards match fuel standards        |
| 2   | Algeria                     | Emission Standards match fuel standards        |
| 3   | Nigeria                     | Emission Standards do not match fuel standards |
| 4   | Tunisia                     | No emission standards                          |
| 5   | Libya                       | No emission standards                          |
| 6   | Botswana                    | No emission standards                          |
| 7   | Ghana***                    | Draft Standards developed                      |
| 8   | All Other African Countries | No information on emission standards           |





# Where do we Stand Now



Source: ARA, 2016

# Ara Specifications Road Map (Afri Series)

| <b>Table 2</b>                              | <b>Time Bound By:</b> |                | <b>2012</b>                | <b>2015</b>    |                |
|---|-----------------------|----------------|----------------------------|----------------|----------------|
|   | <b>GASOLINE</b>       | <b>AFRI-1</b>  | <b>AFRI-2</b>              | <b>*AFRI-3</b> | <b>AFRI-4</b>  |
| 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              |
|   |                       |                |                            |                |                |
|   | <b>Time Bound By:</b> |                | <b>2012</b>                | <b>2015</b>    | <b>2020</b>    |
|   | <b>DIESEL</b>         | <b>AFRI-1</b>  | <b>**AFRI-2 (Upgraded)</b> | <b>AFRI-3</b>  | <b>AFRI-4</b>  |
| Sulphur Content, % mass, max                |                       | 0.8            | 0.3                        | 0.05           | 0.005          |
| Density @ 15°C, Kg/M <sup>3</sup> (min/max) |                       | 800/890        | 820/860                    | 820/860        | 820/860        |
| Cetane Index (calculated), min              |                       | 42             | 45                         | 45             | 45             |
| Lubricity (HFRR @ 60°C), micron, max        |                       | to be reported | to be reported             | to be reported | to be reported |

# Justification for the move

1. Beneficial – reduced Emissions

2. Healthier Population – guarantees Economic Growth

Justification

3. Better Investor Confidence

4. Meet internationally agreed goals eg UNEP (Afri 4 by 2020)

# What are the Causes of the Delay?

1. Need to build African Refining Capacity

2. Source of products e.g. Cote d'Ivoire

Causes of Delay

3. Finalization of Regional Discussions

4. Lack of detailed in country risk/benefits analysis

# THE GHANAIAN SITUATION

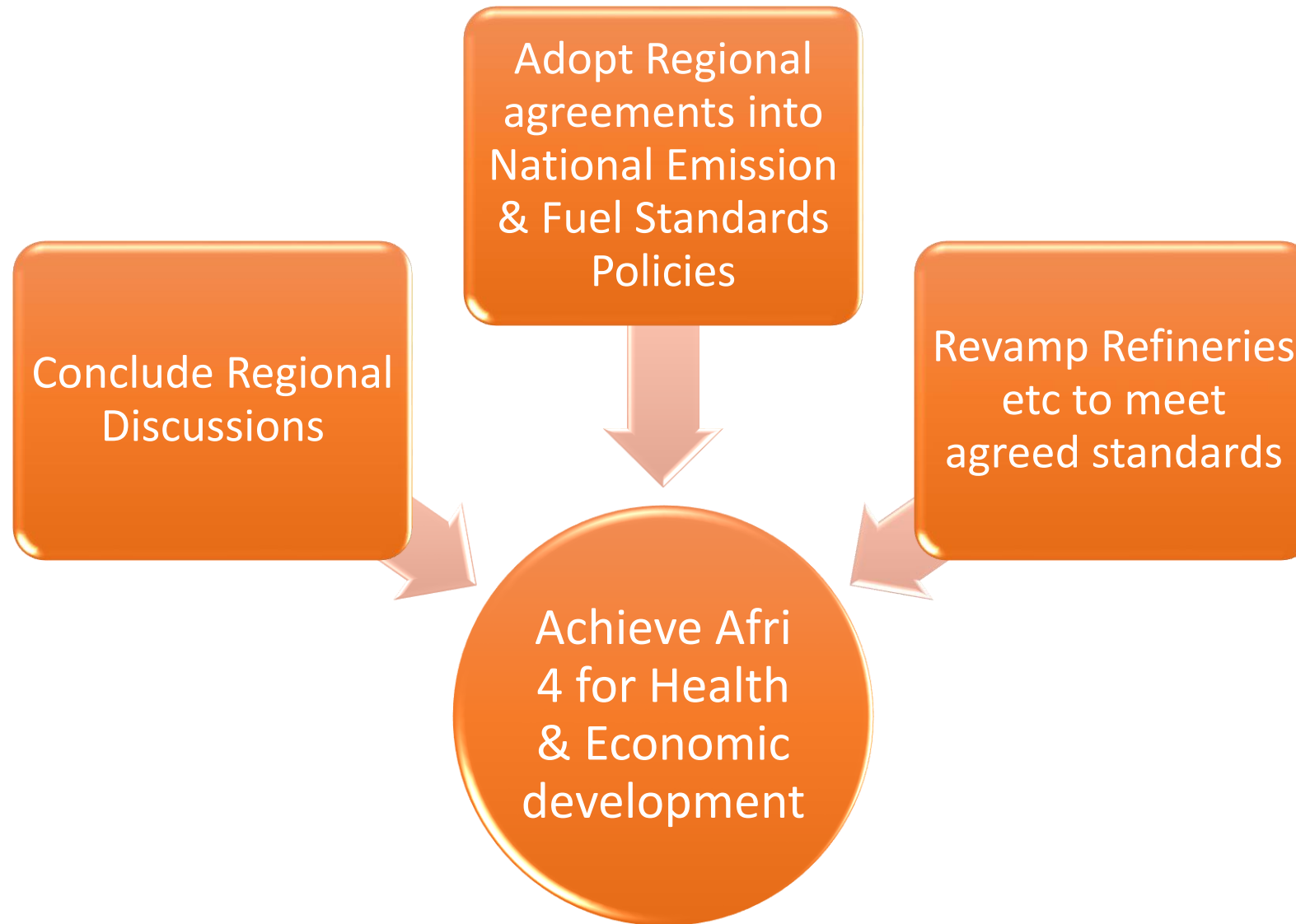
Ghana revised the National Standard Sulphur level in Diesel from 10,000ppm (Max) to 3,000ppm (Max) in 2013.

Following the workshop held in Abuja in June 2016, discussions are ongoing to further revise the sulphur level further down by January 2017.

Consultative meetings have been held with key stakeholders such as the Ministries of Environment and petroleum, the refineries and importers.

The National Task Force has developed a Roadmap for the Tema Oil Refinery to produce diesel at 50ppm (max) by 2020.

# Way Forward



# Conclusion



As Africans, we need to share common recognition that all of us stand to lose if we fail to transform our continent

- Thabo Mbeki

