Growing Need for Collaboration on Human Talent

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World is Driven by Oil and Gas

...and the Oil & Gas Industry is driven by

QUALITY HUMAN RESOURCES

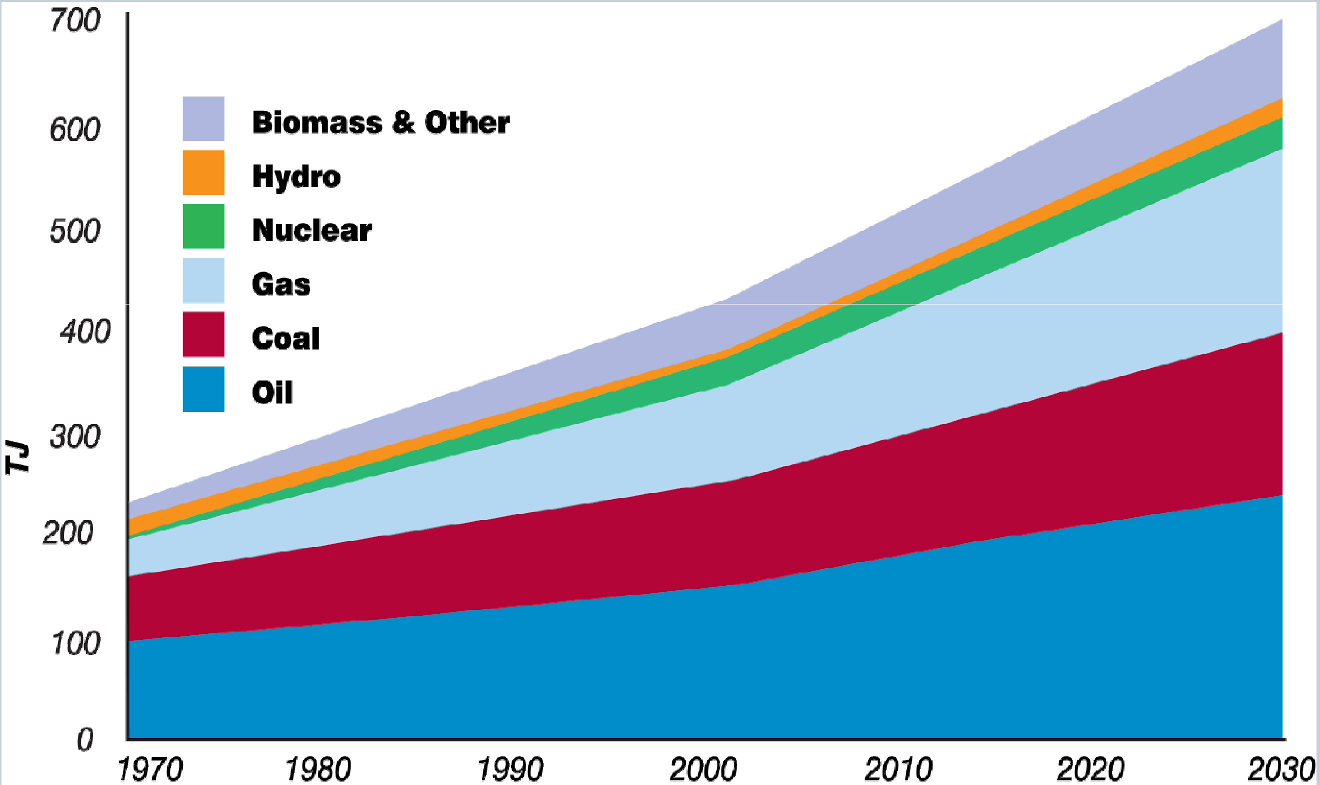
Background

Energy is a part and parcel of economic development and economies in the world, African region is no exception.

It too is striving to optimize energy mixes in the wake of increasing demand, rising energy prices and environmental concerns.

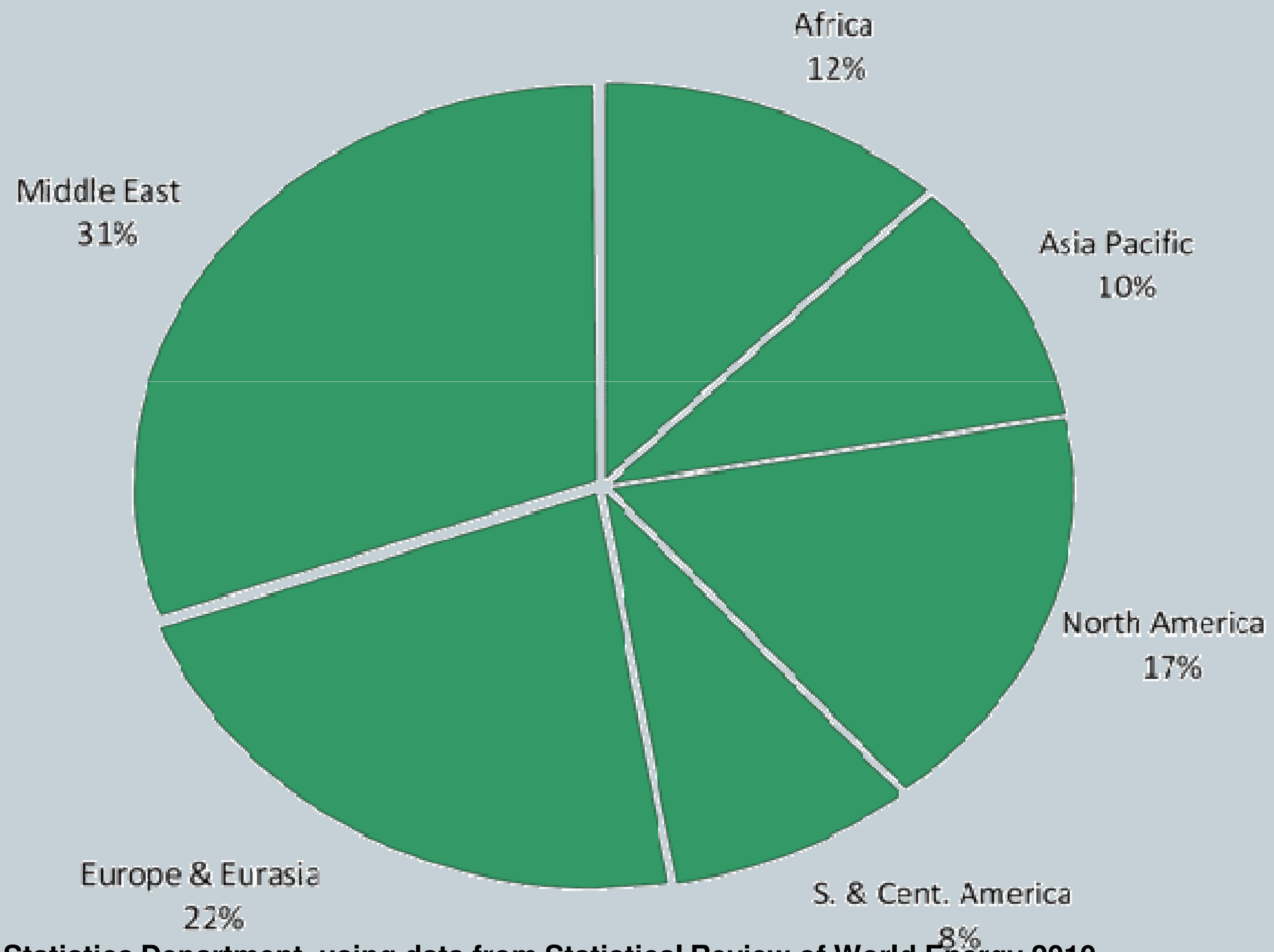
World Energy Scenario

World Primary Energy Demand



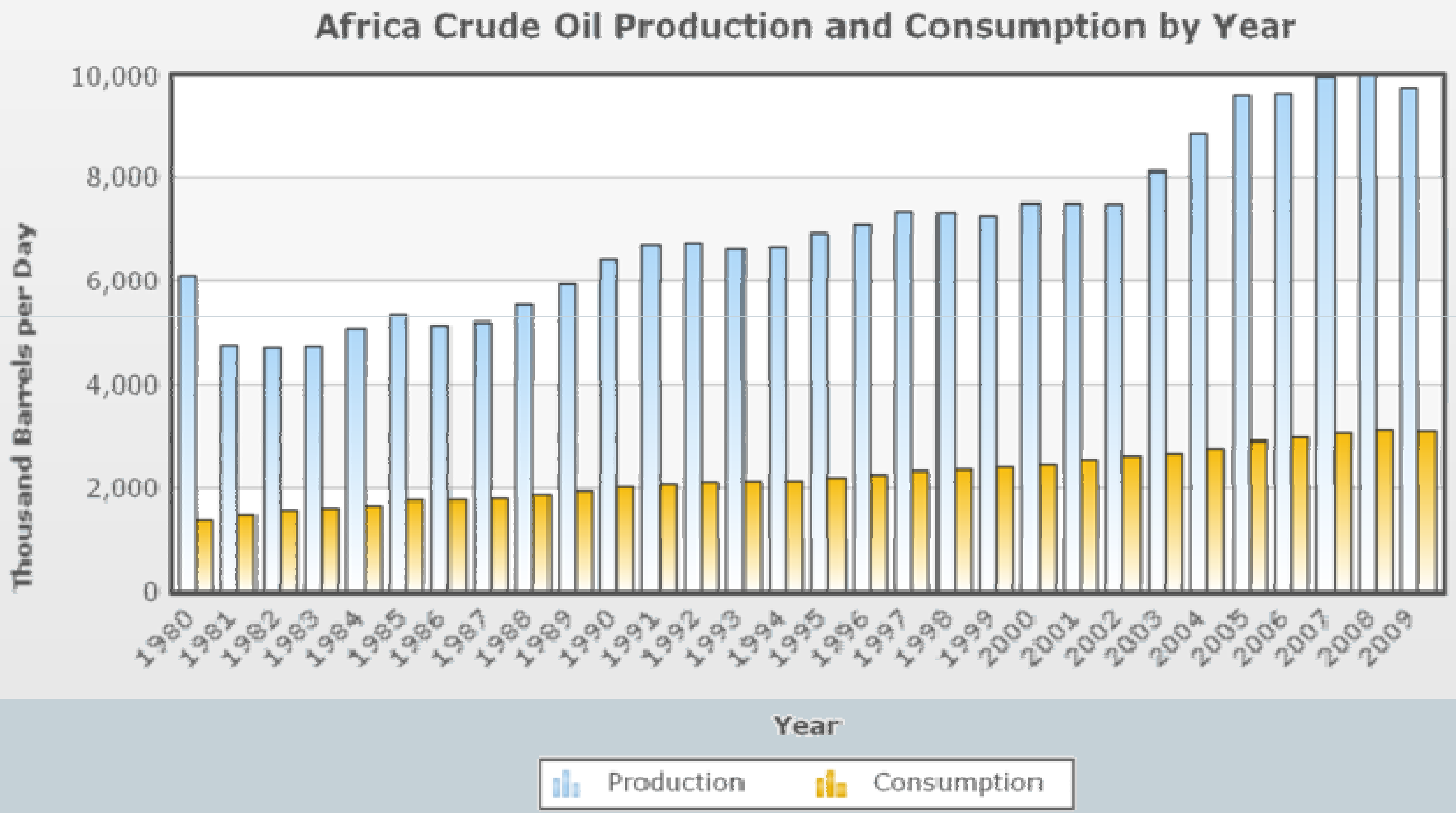
Source: OECD/IEA *World Energy Outlook*

Crude Oil Production Share by World Regions, 2009



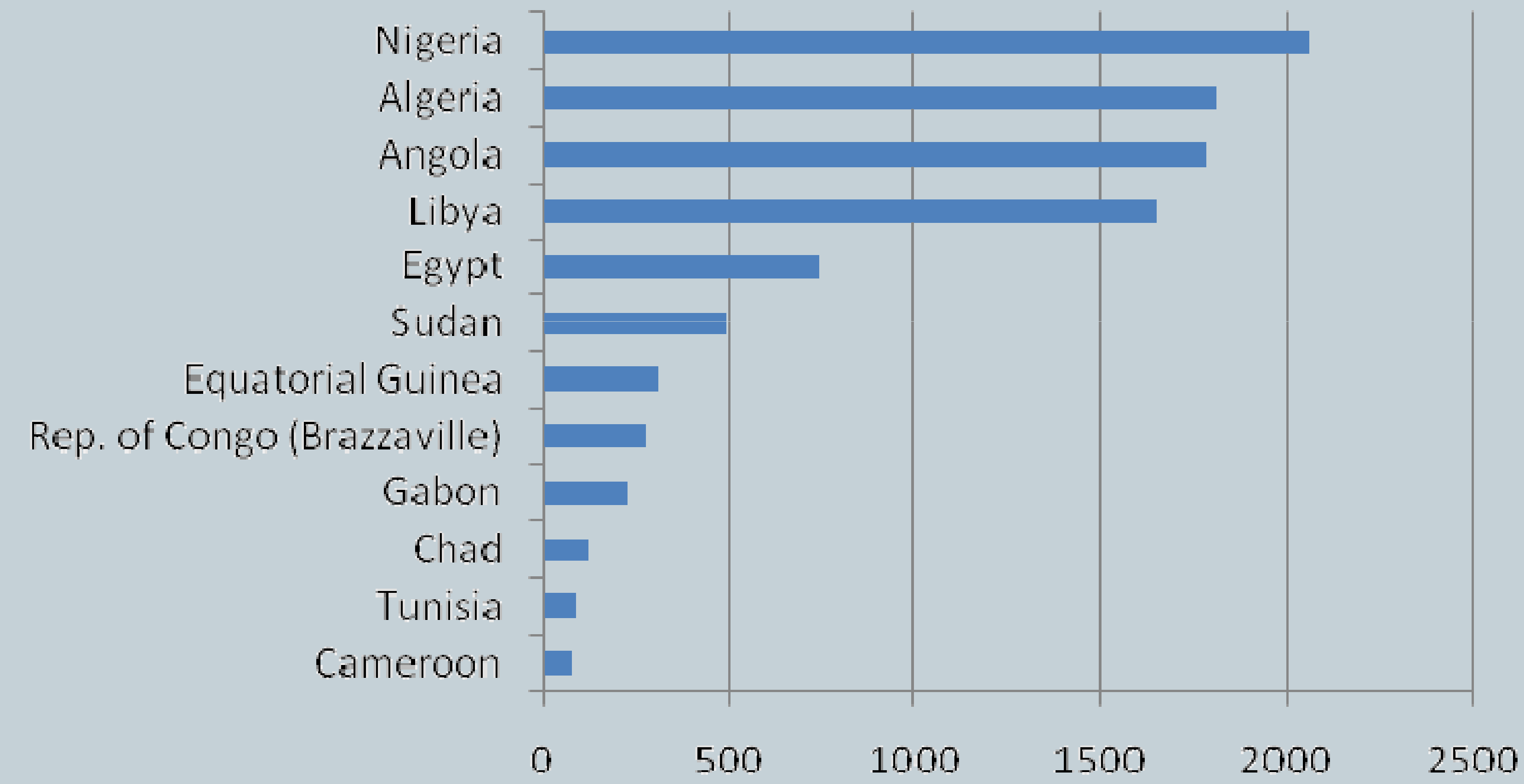
Source: AfDB Statistics Department, using data from Statistical Review of World Energy 2010

Crude Oil Production and Consumption in African Region



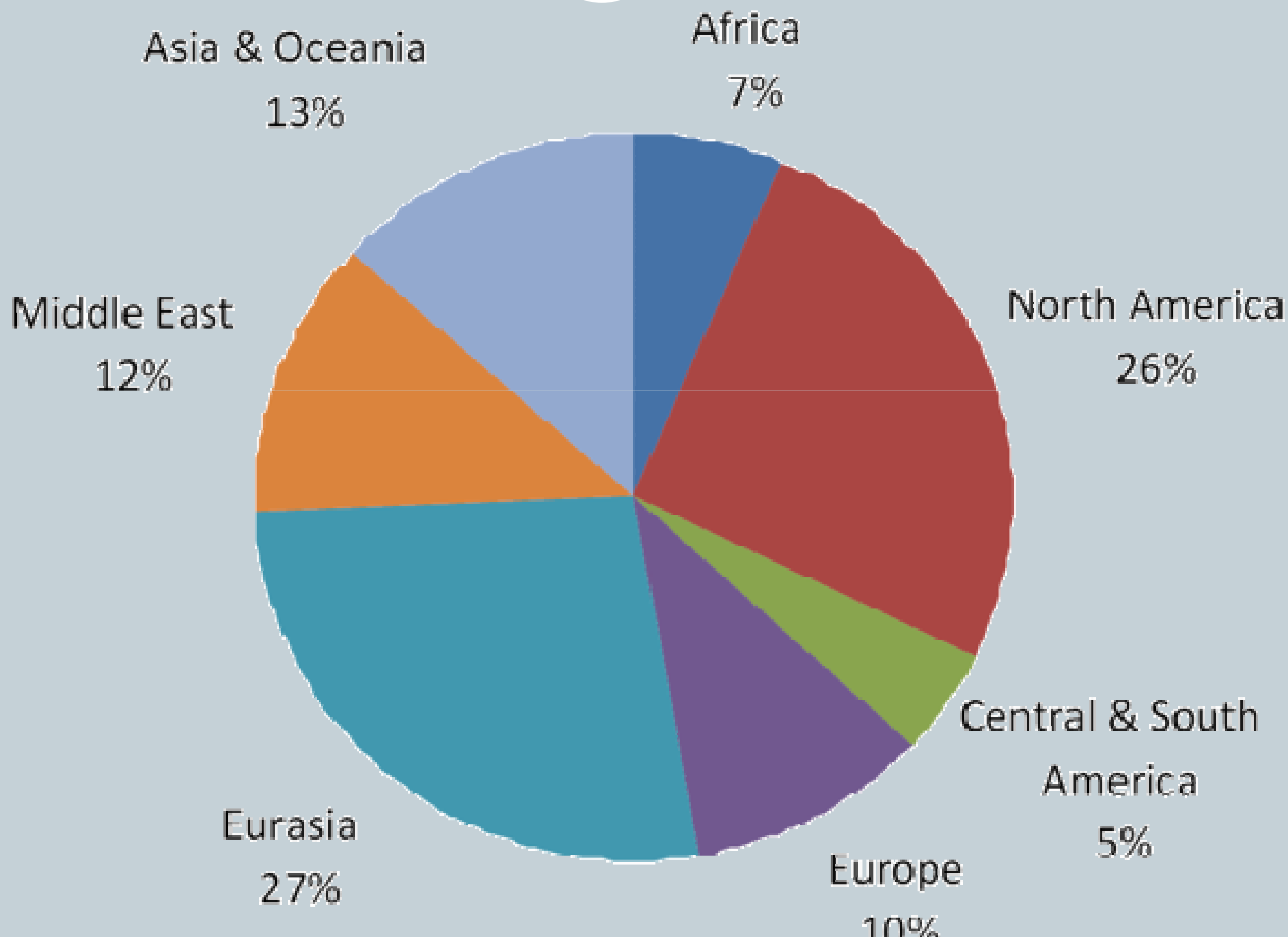
Source: AfDB Statistics Department, using data from Statistical Review of World Energy 2010

Africa: Oil Production by Country, 2009 (Thousand barrels daily)



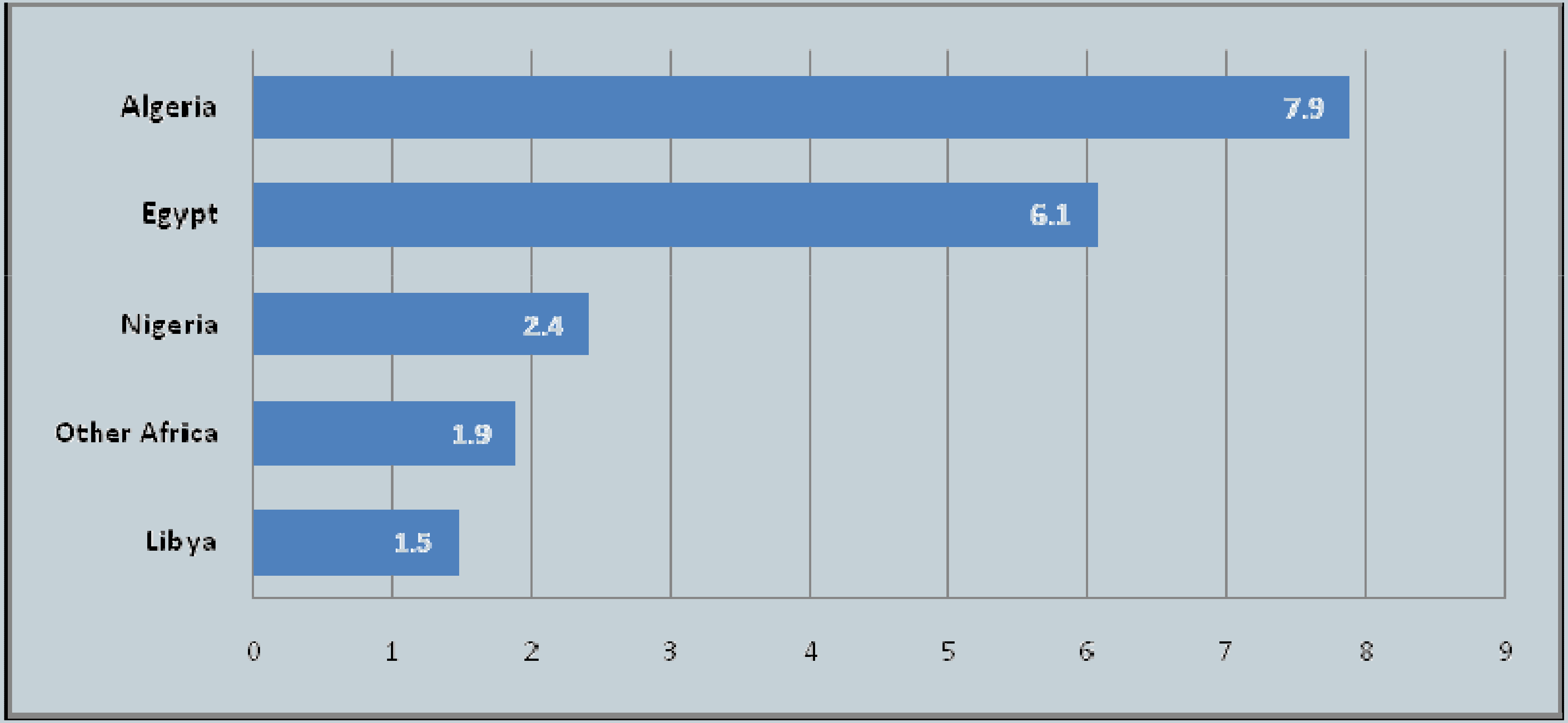
Source: AfDB Statistics Department, using data from Statistical Review of World Energy 2010

Gas Production Share by world Regions, 2008



Source: AfDB Statistics Department, using data from Statistical Review of World Energy 2010

Africa: Gas Production by Country, 2009 (Billion cubic feet per day)



Source: AfDB Statistics Department, using data from Statistical Review of World Energy 2010

What does this mean in terms of the Human Resources?

- The projected increase in demand of oil & gas in African region would witness heightened E & P activity in future.
  - *(China's share of world oil demand is expected to almost ;11% by 2010 & India's to 4.1%: Both countries are scouting for Oil in African region).*
- Hence, the human resource requirement would rise heavily, specially in African region.
- The recent energy demand is in the need for stable energy supply from upstream, midstream & downstream operations

What does this mean in terms of the Human Resources? II

- It requires a sufficient and sustainable supply of workforce
- In future this industry might not be able to maintain a required level of activities because of shortage of qualified workforce, problem is more acute in African Region.
- HR in Oil & Gas Industry, is already facing difficulty in finding people with critical skills.

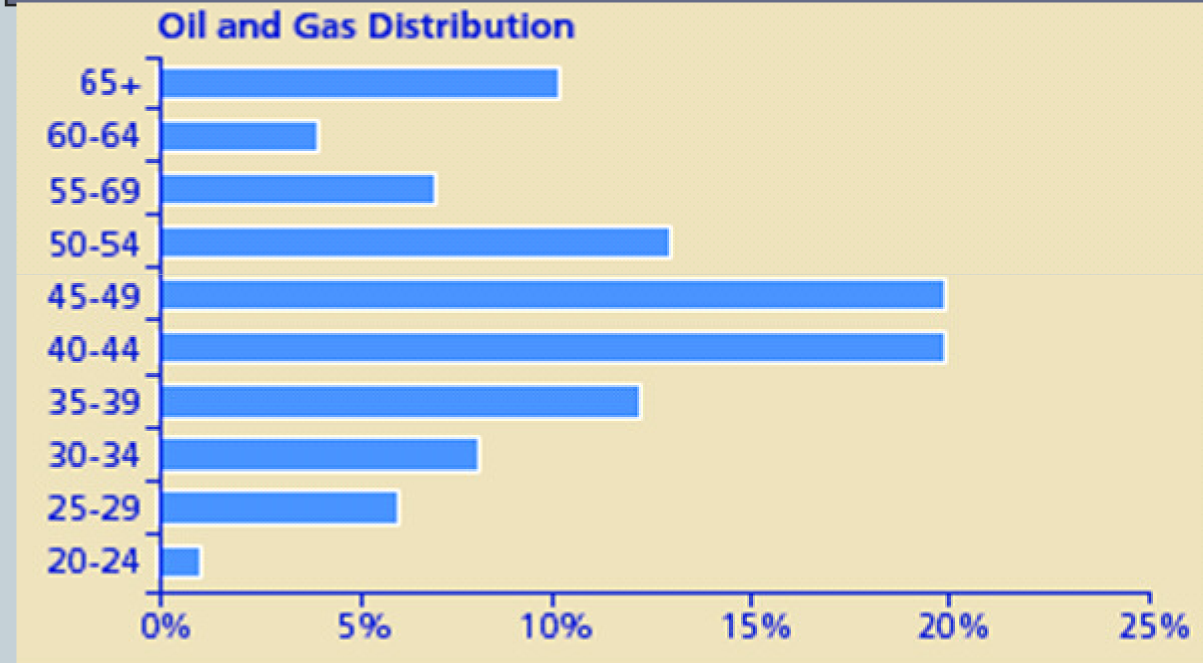
What does this mean in terms of the Human Resources? III

- Therefore, managing the supply of competent workforce will become all the more critical to the industry's ability to sustain and grow.

- The dearth of competencies could stifle developments in the industry which in turn could constrain development of the economy

Workforce Age Distribution

Age distribution of white-collar technical workers



Source: Society of Petroleum Engineers

HR Conundrum in Oil & Gas Industry

Aging Workforce

- A workforce dense with those nearing retirement and few obvious successors, 40% to 60% of aging employees will retire within the next 5 years (mainly Petroleum Engineers and Geoscientists).
- An Industry threatened by the prospect of losing critical knowledge.
- An Industry with a dire need to develop replacement generation to counteract the depletion of large skills.

HR Conundrum in Oil & Gas Industry

Scarcity of Skills

- The current Global Petro-technical Workforce strength is expected to be around 3,75,000. With the rising E & P activity the overall shortfall in the workforce is expected to be about 30,000 professionals by the year 2012.

- Diminishing enrollment in Petroleum Engineering and Geosciences Programs.

Source: Society of Petroleum Engineers (SPE)

Voice of Industry

- The shortage of skilled personnel again looms heavily over the Oil and Gas Industry… ***Source: O & G Journal***

- Operators and service companies face a shortage of manpower as they try to keep up with rising world oil & gas demand in the coming decades… ***Source: O & G Journal***

- Growing skills gap will impede industry's ability to operate, there are not enough experienced employees to continue with major E& P projects… ***Source: Deloitte Research***

- … The Petroleum Industry is troubled one with regard to its physical ability, in terms of human resources to meet the burgeoning world demand for its basic products, crude oil and natural gas…

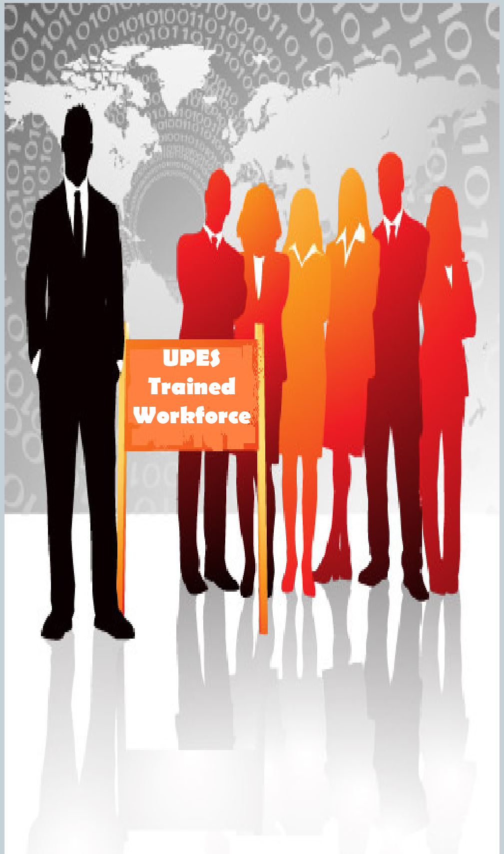
Source: Hartenergy.com Career developments

HR Conundrum in Oil & Gas Industry

Low Industry Attractiveness

- Tough working conditions.
- Negative public perception about environment, ethics and long term viability.
- Industry cyclicality.
- Industry is perceived to be low Tech.
- Low Industry awareness

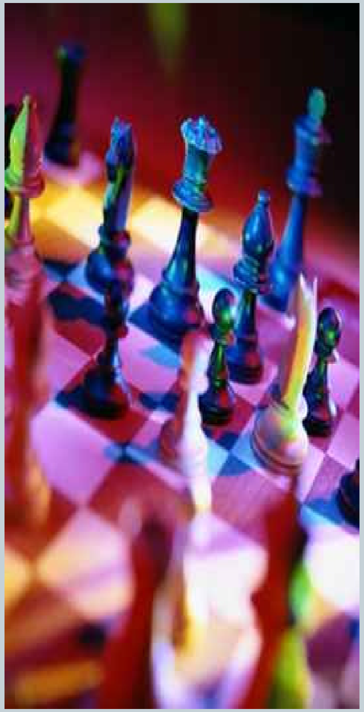
Issues to be addressed for Manpower Development



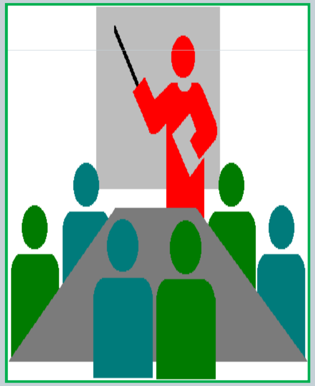
- What HR strategies are crucial to the current and future business strategies?
- Which areas of the business will be more affected by large number of employees retiring within next 5-7 years?
- What impact will the retirements have on the skills and productivity necessary to meet future demand?
- What skills will be needed in next 5 years that we are currently short of?
- What it takes to create that pool, what impact will it have on the business if the pool is not created?

Addressing
Capacity Building Challenges

- Develop a positive brand image to attract and engage new talent.
- Provide innovative incentives to the development of domain specific institutions and Universities across various regions specially in Africa to develop local new talent.
- Provide Tech Savvy learning environment.
- Ensure experiential learning.
- Redeploy retiring senior experienced employees as teachers/trainers in such institutions.
- Introduce continuing education programmes through e-learning and online mechanisms.



Industry Academia Interface



- Symbiotic and synergistic between the academic Institution and the energy sector needs to be build so that a vast reserve of quality technological talent is available
- Continuous dialogue between employers and the academic institutions to identify more clearly the responsibility of employability skills.
- Endeavor to support Universities extensively offering energy related courses

A First Beginning to Rejuvenate Energy Sector Talent Pool

University of Petroleum & Energy Studies

Upgrading the Competency of Existing Work Force

Indian School of Petroleum (ISP)

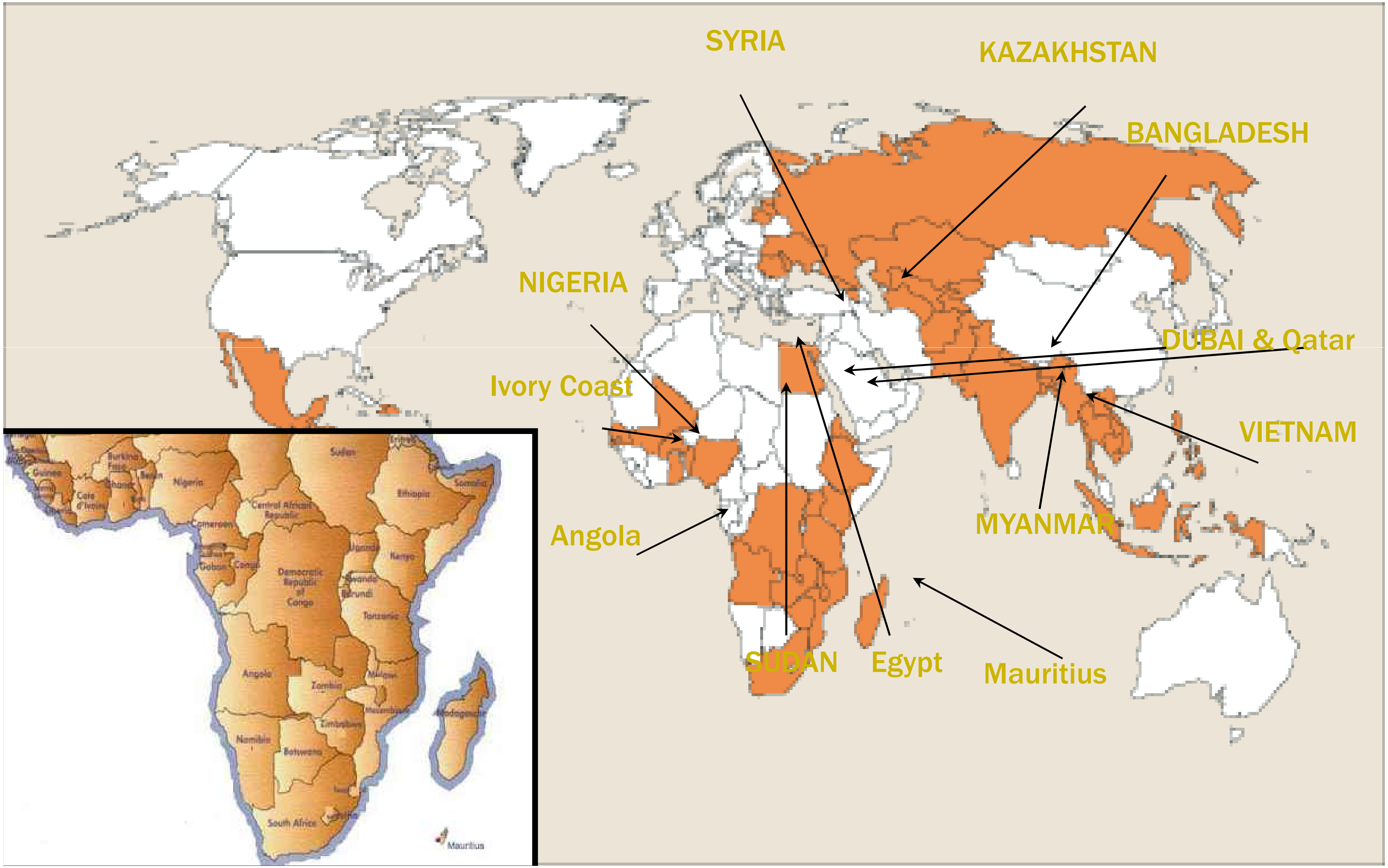
is engaged in actively upgrading the skills of professionals through continuing education programmes.

Providing Best Practices in Work Life and Technology

Energy Institute India (EII)

is membership based institute fostering best practices in Oil & Gas Industry

African Agenda



Capacity Building through Outreach Centers

As depicted in the previous slide, the UPES and associated Institutions will offer at the listed locations

- Full time programmes in Oil, Gas, Energy & Transportation in both technical and managerial streams at both PG and UG level.
- Continuing Education programmes both degree and non degree.
- Training programmes both open and customized.

Invitation to All African Delegates

For this Endeavour,

we extend an open invitation to :

- Universities
- Institutions
- Training Organizations
- Energy Sector Companies

In Africa

To partner with us to establish offshore campuses, study centers, training centers

References

- *Deloitte Research – The Talent Crisis in Upstream Oil & Gas*
- *University of Houston's C.T. Bauer College of Business has conducted a survey*
- *AfDB Statistics Department, using data from Statistical Review of World Energy 2010*
- *Where Is Oil In National Reforms, Parag Diwan, (University of Petroleum & Energy Studies) & D C Patra*
- Society of Petroleum Engineers Survey, 2003
- OECD/IEA *World Energy Outlook*, 2004
- Data from Internet/Public Domain

Thank You

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