



Study Group 1.3

Proposal : Gas Rent and Mineral Property Rights

2nd WOC 1 Meeting
Rio de Janeiro
18~21 February 2013

Gas Rent and Mineral Property Rights

- Fiscal Regimes
 - Mozambique
 - Tanzania
 - Kenya

- Case Study(Deepwater Gas Cases)
 - General Assumption
 - Deepwater Gas Discovery under Current Fiscal Regimes

- Conclusion

Fiscal Regimes(Mozambique)

○ Royalty

	Onshore	Offshore		
		D < 100	100 ≤ D < 500	500 ≤ D
Oil	8%	7%	5%	3%
Gas	5%	4%	3%	2%

* Cost Recovery is limited to 65%

○ Production Sharing (R-Factor Base)

Government (%)`	R-Factor	Contractor(%)
10	$R < 1$	90
20	$1 \leq R < 2$	80
30	$2 \leq R < 3$	70
50	$3 \leq R < 4$	50
60	$4 \leq R$	40

Source : Wood Mackenzie

Fiscal Regimes(Mozambique)

○ R-Factor

R-Factor

= Cumulative Cash Inflows_(n) / Cumulative Capital Expenditures_(n)

Cumulative Cash Inflows_(n)

= Cumulative Cash Inflows_(n-1)
+ Concessionaire Portion of Profit Petroleum_(n)
+ Concessionaire's Cost Petroleum_(n)
- Operating Cost_(n)
- Computed Corporate Income Tax_(n)

Cumulative Capital Expenditures_(n)

= Cumulative Capital Expenditures_(n-1)
+ Exploration Costs_(n)
+ Development and Production Capital Expenditures_(n)

Source : Wood Mackenzie

Fiscal Regimes(Mozambique)

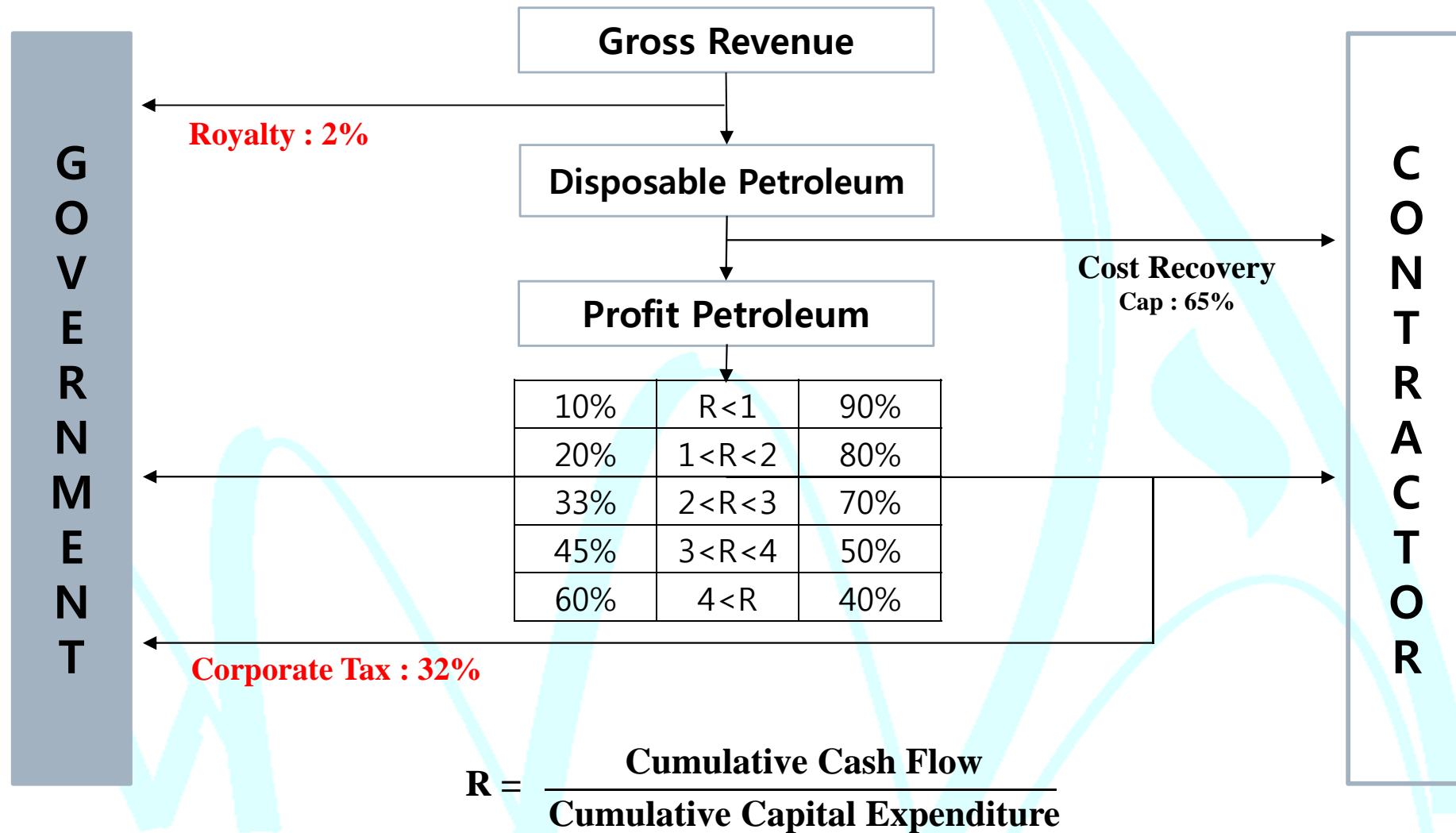
- The Corporate Income Tax: 32%
- Signature Bonuses: Not Applicable
- Production Bonuses

Production	Production Bonus(\$)
Initial Commercial Production	200,000
Production > 25,000 BOE per day average for a month	200,000
Production > 75,000 BOE per day average for a month	200,000

Source : Wood Mackenzie

Fiscal Regimes(Mozambique)

○ Schematic



Source : Wood Mackenzie

Fiscal Regimes(Tanzania)

- Royalty
 - Deepwater(5%), Onshore/Offshore(12.5%)
- Production Sharing(Daily Production Base, Negotiable)
 - Natural Gas(Deepwater)

Daily Natural Gas Production(mmcfd)	TPDC (%)	Contractor(%)
0-249.99	50	50
250-499.99	55	45
500-749.99	60	40
750-999.99	65	35
1,000-1,249.99	70	30
1,250-1,499.99	75	25
>1,500	80	20

* TPDC : Tanzania Petroleum Development Corporation

Fiscal Regimes(Tanzania)

- Production Sharing(Daily Production Base, Negotiable)
 - Natural Gas(Onshore/Offshore)

[Source : Tanzania Model PSA]

Daily Natural Gas Production(mmcfd)	TPDC (%)	Contractor(%)
0-19.99	60	40
20-39.99	65	35
40-59.99	70	30
60-79.99	75	25
80-99.99	80	20
>100	85	15

Fiscal Regimes(Tanzania)

- Corporate Income Tax : 30%
- Additional Profit Tax(APT)
 - This is payable when contractors achieve specified real rates of return on net cash flow from Development Area
 - APT Rate(%)

	First Account	Second Account
Tax Rate(%)	25	35
B Factor(%)	20	30

* B Factor : Accumulated Cash Position

[Source : Wood Mackenzie, 2012]

- B Factor(Accumulated Cash Position) is calculated as follows,

Fiscal Regimes(Tanzania)

- Formula of B Factor(Accumulated Cash Position)

$$F = A(100\% + B) + C$$

A: The Accumulated Net Cash Position in the Previous Year

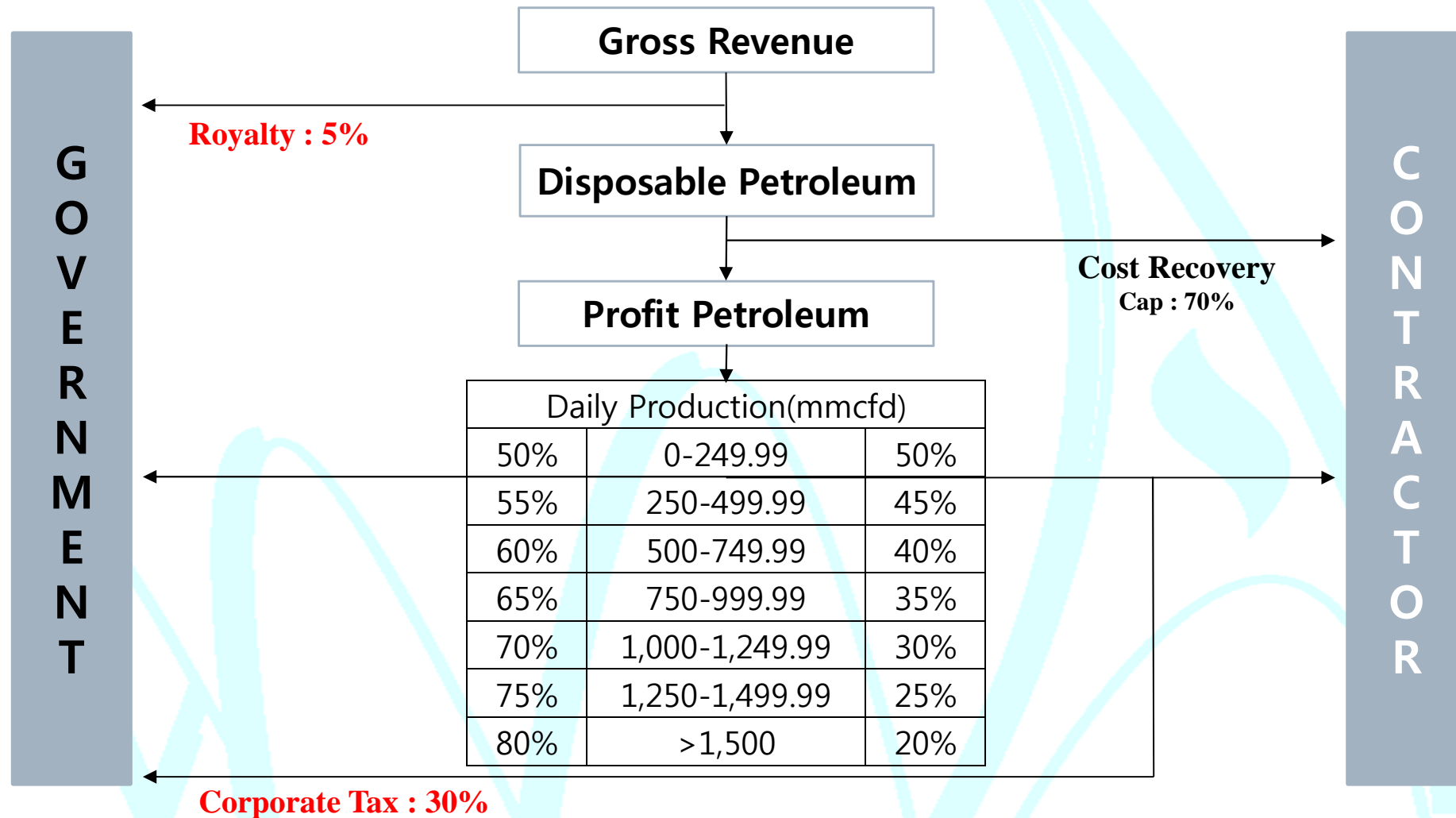
B: The Applicable APT Tax Rate for the Relevant Account +
The Percentage Change in the Average Level of The USIGPPI

* USIGPPI : United States Industrial Goods Producer Price Index

C: Net Cash Position for the Year in which calculations are being
made

Fiscal Regimes(Tanzania)

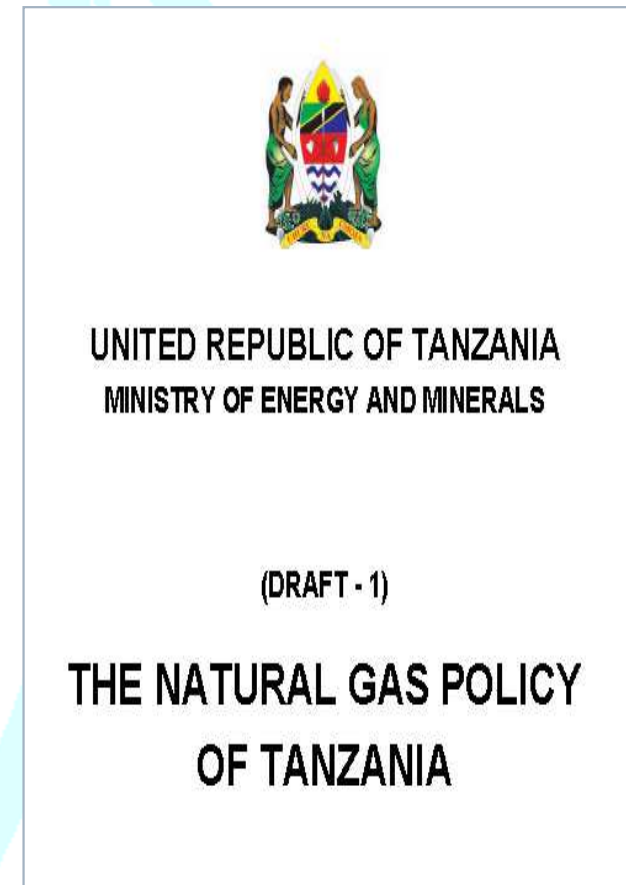
○ Schematic (Based on the Deepwater Gas)



[Source : Tanzania Model PSA]

Fiscal Regimes(Tanzania)

- Current Status of Tanzanian Policy
 - Released the First Draft of **Natural Gas Policy** (Nov. 2012)
 - Domestic Market Supply
 - Revenue Management
 - PPPs(Public-Private Partnerships)
 - Legal and Regulatory Framework
 - A Review of TPDC's Roles



Fiscal Regimes(Tanzania)

- Current Status of Tanzanian Policy
 - The following regulations are currently in being developed
 - **Gas Utilization Master Plan** (which will build on the framework established in the Policy)
 - **Natural Gas Act** (updated from the 2009 Gas Supply Bill and conformed with the Policy)
 - **Upstream Act**
 - **Petroleum Policy**

Fiscal Regimes(Kenya)

○ Production Sharing

- Since Petroleum Exploration and Production Act published in 1982, Exploration and Production has been carried out under PSC based instead of Royalty/Tax System

○ Production Sharing (Offshore Profit Oil Splits)

Production(mmcfd)	Government(%)	Contractor(%)
< 20	45	55
20 – 50	50	50
50 – 100	66	34
> 100	70	30

[Source : Wood Mackenzie, 2012]

Fiscal Regimes(Kenya)

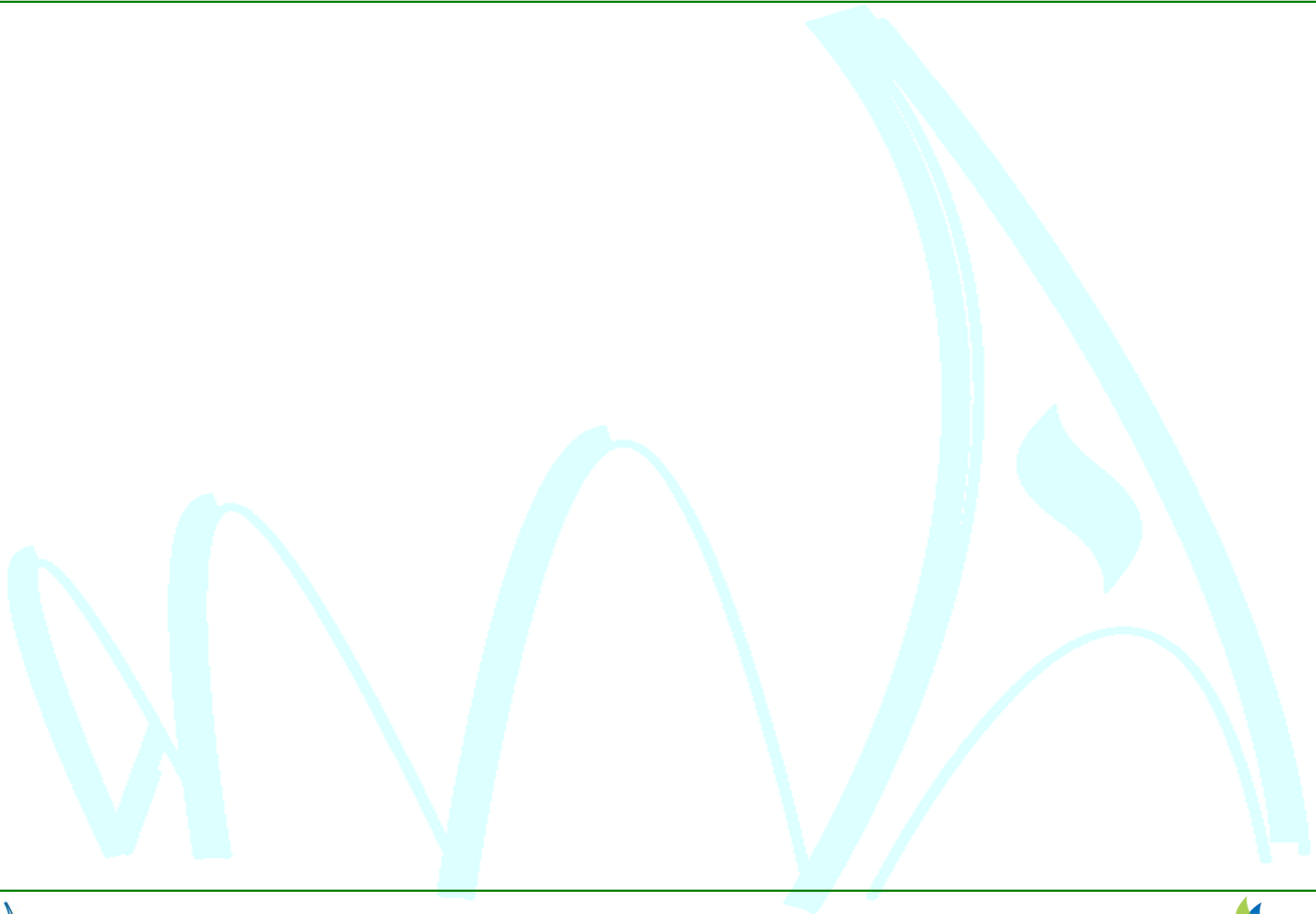
○ Production Sharing(Offshore Profit Oil Splits)

Production('000b/d)	Government(%)	Contractor(%)
< 120	45	55
120 – 300	50	50
300 – 600	66	34
> 600	70	30

[Source : Wood Mackenzie, 2012]

○ Cost Recovery Limit : up to 65%, but it is negotiable

Fiscal Regimes(Kenya)



Fiscal Regimes(Kenya)

○ Corporate Income Tax(CIT)

- A resident corporation is on worldwide income at the rate of 30%
- A nonresident corporation is taxed on income derived or accrued from Kenya at the rate of 37.5%.
 - Corporate Income Tax is paid for and on behalf of the Contractor from the GoK's Profit Share

○ Windfall Tax

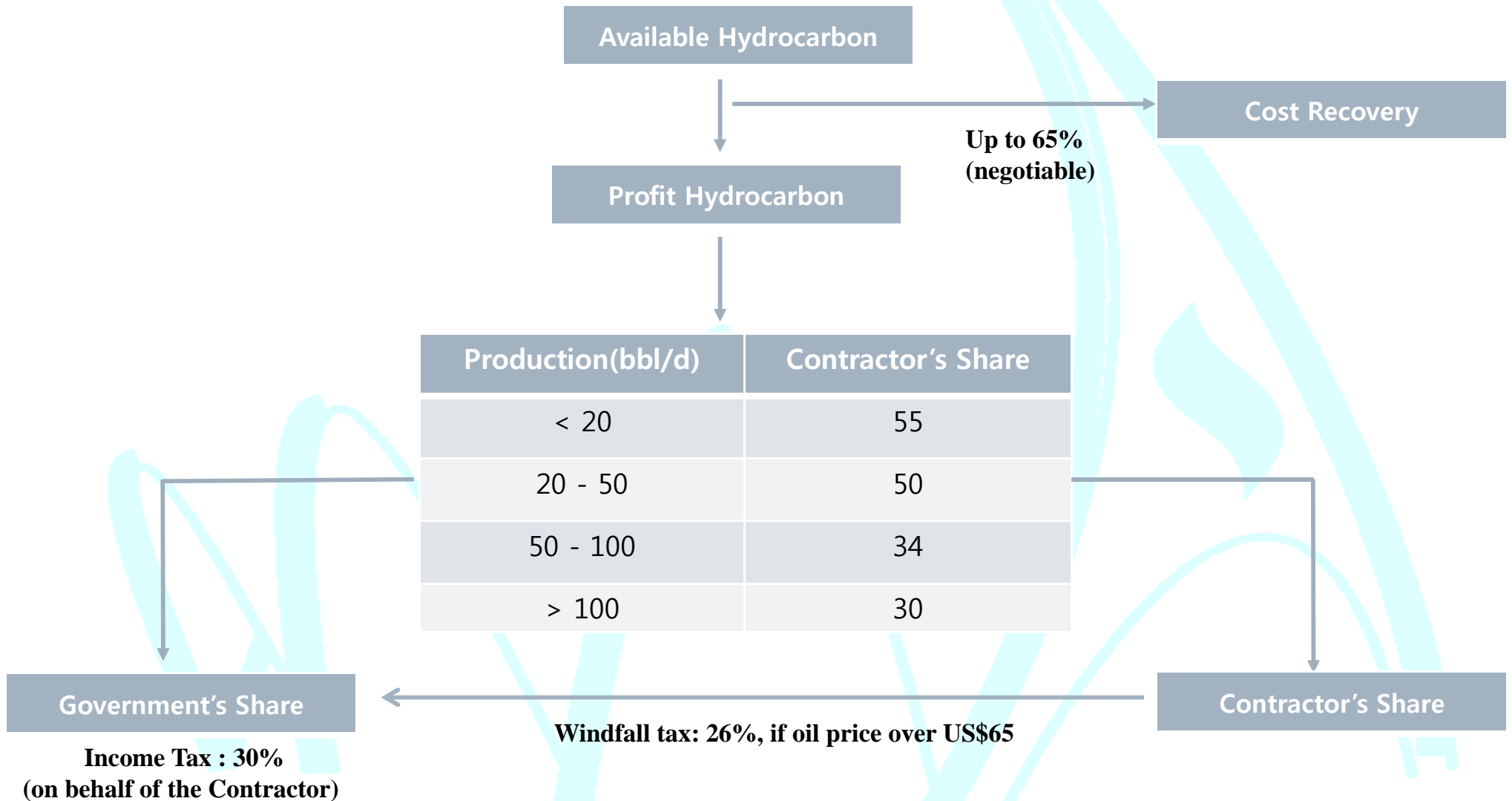
- If the crude oil price exceeds US\$ 65 per barrel FOB, the Second Tier Amount will be calculated according to the following formula;
$$R = CSPO \times 26\% \times (V - \text{Threshold Price})$$

Where, CSPO is Contractor Share of Profit Oil
R is the Second Tier Amount in US\$
V is the value of Crude Oil in United States for that Calendar Quarter

[Source : Wood Mackenzie, 2012]

Fiscal Regimes(Kenya)

○ Schematic Diagram



Case Study

○ General Assumptions

- Deepwater Gas Discovery(Water Depth : 2,000m)
- Distance to Delivery Point : 75km
- Exploration & Appraisal Cost : US\$ 700 million
- Exploration in Seven Years
- Exploitation in Five Years
- Year to Plateau : 4 Years
- Plateau Duration : 10 Years
- Field Life : 20 Years
- Same Production Schedule and Expenditures in 3 countries
- No Bonuses

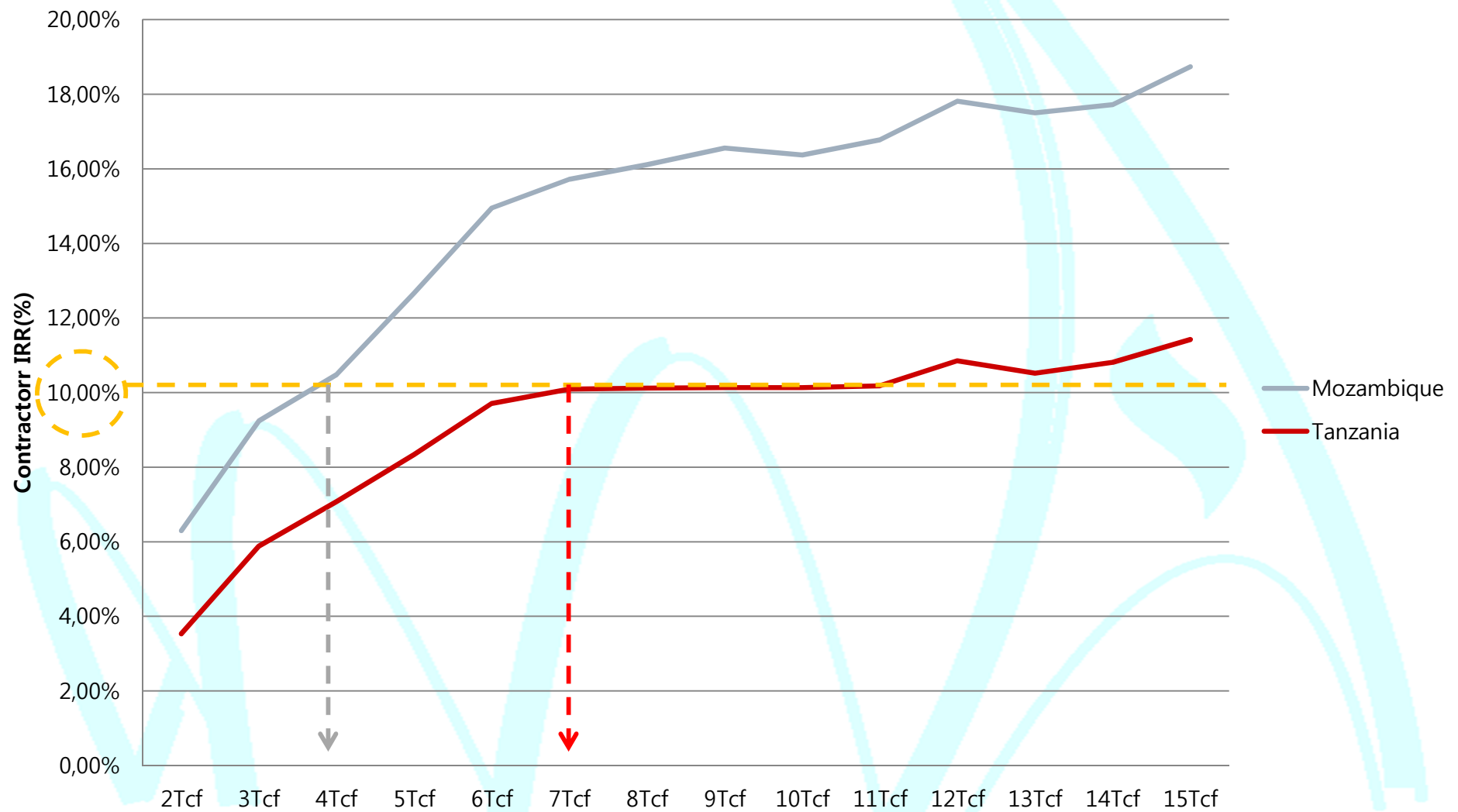
Case Study(Current Fiscal Regimes)

- Assumptions
 - Recoverable Reserves : 2~15 Tcf ,
 - Feed Gas Price : 5\$/mcf@2013, Annually 2% Inflation
- Typical Fiscal Regimes for Deepwater Blocks

	Mozambique	Tanzania
Royalty	3%	5%
Cost Recovery Cap	65%	70%
Profit Sharing	R-Factor Base	Production Base
Income Tax	32%	37.5%
Additional Tax	-	FANCP 25% SANCP 30%

Case Study (Current Fiscal Regimes)

Contractor IRR vs Field Size



Conclusion

- For Deepwater Gas Project,
 - Mozambican fiscal regimes are more attractive than those of Tanzania and Kenya.
 - Tanzanian and Kenyan fiscal regimes are not well organized.

- To encourage deepwater gas projects in Tanzania and Kenya, more preferable regimes for developers are required.
 - However, developers in Tanzania are worried about New Tanzanian Oil&Gas Bill.

References

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- Karembu Antony Njeru, 2007, Kenya Oil & Gas fiscal Regime: An economic analysis on attainment of the government objectives
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- Ministry of Energy, 2011.Feb, Overview of Petroleum Exploration in Kenya
- Wood Mackenzie, Country Report(Mozambique, Tanzania, Kenya)



Thank you!