

# The GGFR Partnership





INTERNATIONAL FINANCIAL CORPORATION

Canadian Regulator's Workshop  
Calgary, 14 September 2006



GGFR  
Global Gas Flaring Reduction  
A Public-Private Partnership



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# How Much Gas is Flared ?



- GGFR estimates that global flaring in 2004 was around **150 bcm** or **400 MtCO<sub>2</sub>eq per year**, a level that has stayed relatively constant for the last 20 years
- 75% of global flaring occurs in fewer than 10 countries
- Major flaring areas are: Russia, Gulf of Guinea and the Middle East

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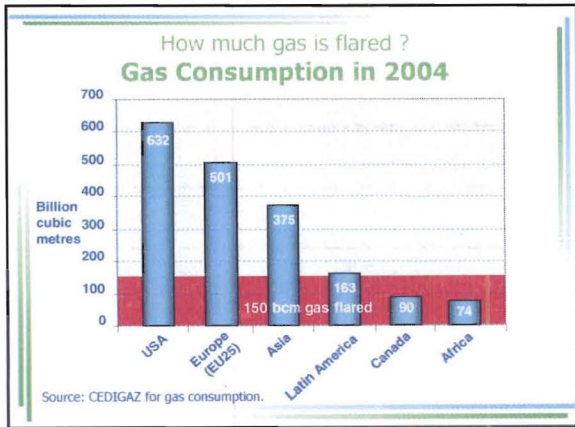
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### Why have global flaring levels stayed relatively constant?

Many governments and companies have made significant investments in gas flaring reduction projects, **but**

**Two key factors** limit the impact of these efforts:

- **Global oil production increase** leads to associated gas production increase, offsetting efforts to reduce gas flaring
- Development of gas markets, gas infrastructure, and flaring reduction projects often requires **collaborative rather than individual action**

→ **A forum to improve cooperation between stakeholders was needed**

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### Collaborative Action: GGFR

- **August 2002** : GGFR Partnership was formed at the World Summit on Sustainable Development in Johannesburg
- **GGFR Objective** : To support governments and the petroleum industry in their efforts to reduce flaring and venting
- A **growing partnership** including governments, NOCs, IOCs and the WBG, now extended to end 2009

→ **Access to 80% of the sources of global flaring**

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### Phase I achievements

- Significant representation of world gas flaring in the Partnership
- Global deliverables
  - Global standard for flaring and venting
  - Regulatory best practices
  - Gas flaring data tool
  - Carbon credit financing
- In-country public-private partnerships
  - 17 demonstration projects

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Is CNWOPB system equivalent?  
? what is this

### Phase II strategy (2007-2009)

- Identify and prioritize high-impact countries
- Concentrate on in-country projects
- Assist partner countries in development of CIPs
- Accelerate sustainability strategies in existing partner countries and global deliverables / activities (hand-off, mainstream, exit)
- Measure tangible results (KPIs)
- Publicize successes

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### Some current GGFR activities... The GGFR Data Tool

There is great uncertainty in reported flaring and venting data

- Partners decided to develop a web based data tool/data base to :
  - gather consistent data
  - better understand flared and vented gas volumes per country
  - Public reporting of data
  - track flaring reduction versus forecasts
- Data tool roll out in 2006/2007

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*\* CNLOPB - annual Report*

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### Some current GGFR activities... Satellite imagery

- With the US National Oceanic and Atmospheric Administration (NOAA), a quantitative study is currently being carried out :
- ✓ GGFR partners are providing historical flare volume and location data
  - ✓ NOAA is using these data to calibrate flare satellite image brightness

→ This calibration will allow global flare monitoring

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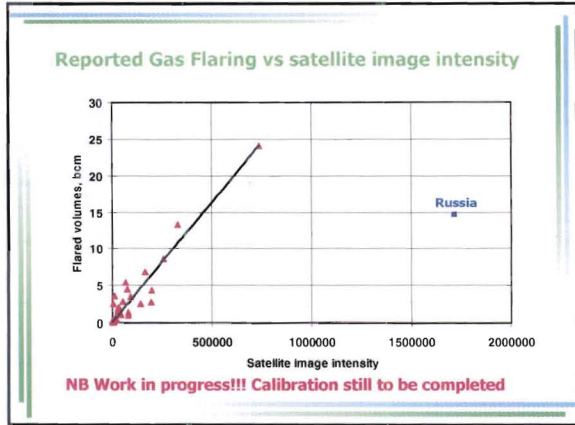
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Some current GGFR activities....  
**Global flaring reduction forum**

Global Forum 12 -15<sup>th</sup> Dec 2006 in Paris

Objectives:

- Raise awareness about flaring
- Share of best practices, success stories
- Raise awareness of opportunities & technologies to reduce flaring
- [www.flaringreductionforum.org](http://www.flaringreductionforum.org)

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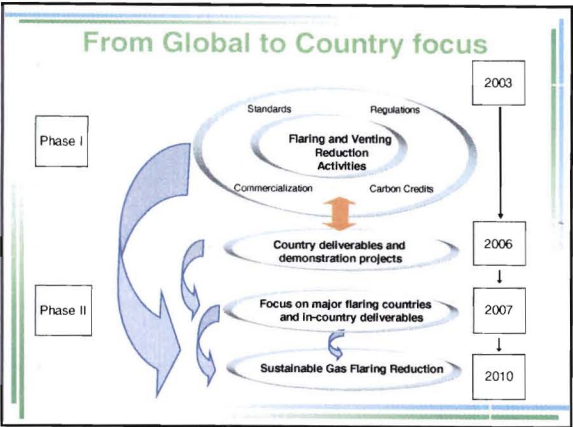
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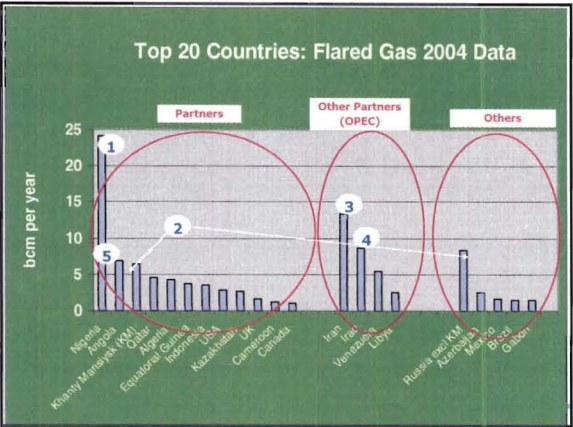
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**Thank you for your attention!**

**IFC** **WORLD BANK**

**GGFR**  
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- Back up slides

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Current GGFR Public and Private Partners

Countries/NOCs

Algeria (Sonatrach)  
Angola  
Cameroon (SNH)  
Chad  
Ecuador  
Equatorial Guinea  
Indonesia  
Khanty Mansiysk (Russia)  
Nigeria  
Kazakhstan  
Qatar

Donors

Canada  
Norway  
UK (Foreign Commonwealth Office)  
USA

IOCs

BP  
ChevronTexaco  
ENI  
ExxonMobil  
Norsk Hydro  
Shell  
Statoil  
Total  
Marathon Oil

Multilateral Organizations

The World Bank  
OPEC

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Gulf of Guinea

Challenge:

- Major gas flaring (~6 bcm) in the Gulf of Guinea (Nigeria, Cameroon, Equatorial Guinea)

Solution:

- Studies and facilitation in the individual countries over 2003-2004 failed to deliver results
- Expanded the boundaries through a proposal mid-2005 for a Regional Gas Utilization Feasibility Study
- As a result:
  - As a result, two MOUs have been signed between the countries
  - A regional study is planned with three governments and the IOCs

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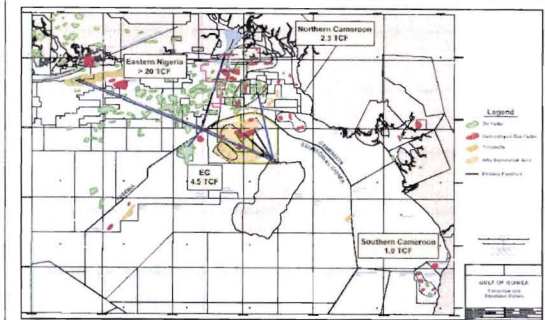
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Geographical Scope...



Demonstration Projects

Partner Countries	Projects	Carbon credit possibility	Potential Gas flare reduction
Algeria	Ohanet		4.5 Bm³
	TFT (oil)	✓	
	In Amenas	✓	
Nigeria	Gas pipeline South-North		Approx. 4.6 Bm³
	Gas to Power, AFAM	✓	
	Ob re-injection project	✓	
	Ofon Phase II		
Angola	Angola LNG	✓	7 Bm³ / y
Cameroon	P/L Rio del Rey to Limbe		3 Bm³
Equatorial Guinea	Zafiro pipeline to ELNG		13 Bm³
Gulf of Guinea	Regional Gas Transport system		4-5 Bm³ / y
Indonesia	AG Recovery & utilization Project 1	✓	Approx. 1 Bm³ for C Finance only
	AG Recovery & utilization project 2		
Russia (Khaty Mansiysk region)	Surgutneftegas	✓ (II)	6.5 Bm³
	TNK-BP	✓ (II)	
	Danilovsk	✓ (II)	

Nigeria CDM Project Status

Project	Project Title	SCD-MV	Capacity Building
1. Nigeria- AFAM	Gas to power ER from flaring out and fuel switch 4.5 bcm	Pre drafted	+ 1 IOC/Govt training
2. Nigeria- Ob/Ob	Gas to re-injection in oil reservoir 3.5 bcm	Being prepared	DNA Guidebook on project preparation
3. Kwale	Gas to power ER from flaring out only	Validated. Next step registration / official endorsement by UNFCCC (1.4 MtCO2/y)	

Country Selection

Potential target countries for 2007-2009:

- Africa : Gulf of Guinea (Cameroon, Equatorial Guinea, Nigeria), Angola
- Ex-CIS : Russia, Kazakhstan, Azerbaijan
- Middle East : Libya, Qatar, UAE
- Latin America : Brazil, Mexico, Venezuela
- Asia : Indonesia

Country Selection

Note: Data shown is purely for illustration

High Impact Country Assessment Table

Country		General	Regulatory Factors	Economic & Commercial Factors	Political Factors	Proposed Action
Better Known Countries						
Nigeria	2.6					
Kazakhstan	2.7					
Equatorial Guinea	3.0					
Cameroon	1.7					
Indonesia	3.6					
Some Information						
Russia	14.7					
Limited Information						
Azerbaijan	2.6	?				
Iraq	8.8			?		
Qatar	4.5+					
Brazil	1.5		?	?		?
Mexico	1.0				?	
Venezuela	5.4					
Libya	2.5	?	?			

Nonmanufacture

Opportunities

Neutral

Favorable

Green = factors supportive of GGFR initiatives (opportunities)

Red = factors that represent barriers to GGFR initiatives (impediments)

? = Unable to form view

Country Selection

Activities	Effort		
	CT	C	OC
Planning Phase			
Convene preliminary meeting(s) with country contact to review assessment, introduce targeted GGFR offerings, and secure membership. (For existing partner country, secure formal commitment to membership for extended period).	L	S	S
Identify champion(s) in the country who could own / drive the work program in the country.	L	S	L
Engage country to define tailored, country-specific strategy and work program, including specific project champions. Get buy-in of all key players – agree on ownership, roles, etc. (Note: Utilize Stakeholder Engagement Process (“Standard”) where appropriate)	L	S	L
Develop country-specific communication / roll-out strategy.	L	S	S
Develop country-specific plan to evaluate GGFR program effectiveness	L	S	S
Develop country-specific sustainability strategy (handoff, mainstream, exit.)	L	S	S