



UN FRAMEWORK CLASSIFICATION APPLIED TO COAL DEPOSITS

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**Workshop on Energy Statistics in ESCWA Member
Countries**

**Regional Seminar on Energy Reserves/Resources
Classification in ESCWA/OPEC Member Countries**

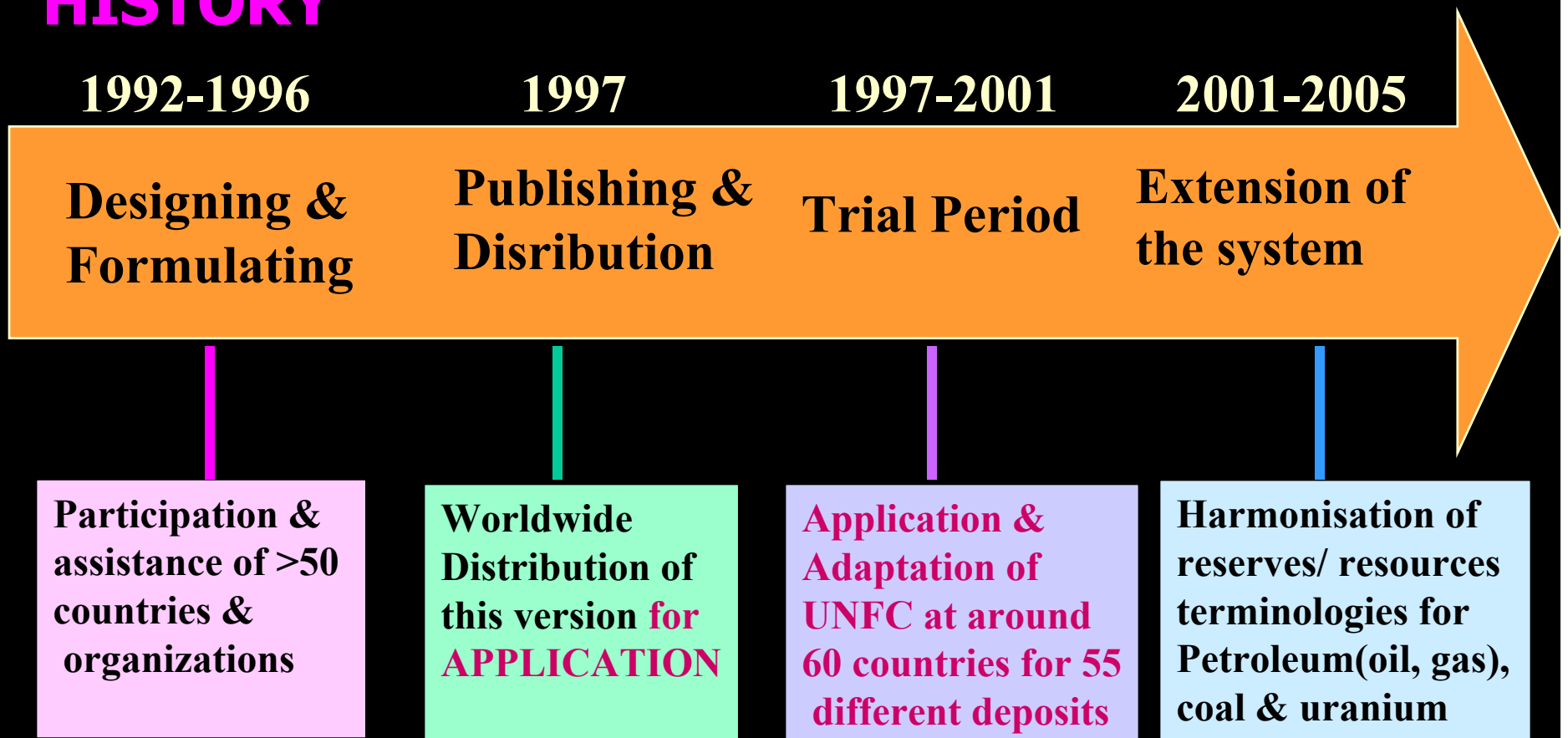
Beirut, 31 May – 2 June 2004

CONTENT

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- Examples for adaptation & implementation of UNFC
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Status of the Implementation of UNFC

HISTORY



+ Further application of UNFC

Status of the Implementation of UNFC

- PREVIOUS ORGANIZED SEMINARS

1998

ESCAP/ECE (Bangkok)

(Cambodia, China, Indonesia, Japan,
Malaysia, Philippines, Thailand, Vietnam)

1999

Indonesia

Brazil (for Latin America)

2000

Bulgaria

India Ocean Rim Countries

2001

Philippines (ESCAP)

2002

Turkey


2003

**Russian Federation
& CIS Countries**

Status of the Implementation of UNFC

- Adaptation of country's national systems to UNFC and implementation were conducted by mainly;
 - individual mining companies from industry
 - government organisations such as:
 - Ministries of Natural Resources
 - National Geological Surveys
 - Technical Universities, Institutes, Bureaus on mining and geology

Status of the Implementation of UNFC

 Growing number of countries are implementing UNFC as a national system.

- a number of countries included UNFC principles to their Mining Law or developed national standards.

- **Such as:**
 - Bulgaria
 - Romania
 - Slovakia
 - Ukraine
 - China,
 - Cambodia
 - India
 - Indonesia
 - Iran
 - Malaysia
 - Philippines
 - Thailand

 Some countries **continue updating their national systems** on the basis of UNFC

 Other countries are considering to apply it

Status of the Implementation of UNFC on Coal Deposits by the regions

Europe

Austria, Bulgaria,
Estonia, Germany,
Greece, Hungary,
Lithuania, Poland,
Romania, Russia,
Slovenia, Slovakia,
Spain, Turkey,
Ukraine

Asia-Pacific

Armenia,
China,
Cambodia,
India, Iran,
Indonesia,
Kazakhstan,
Malaysia,
Philippines,
Thailand,

America

Brazil,
USA

Africa

Zimbabwe



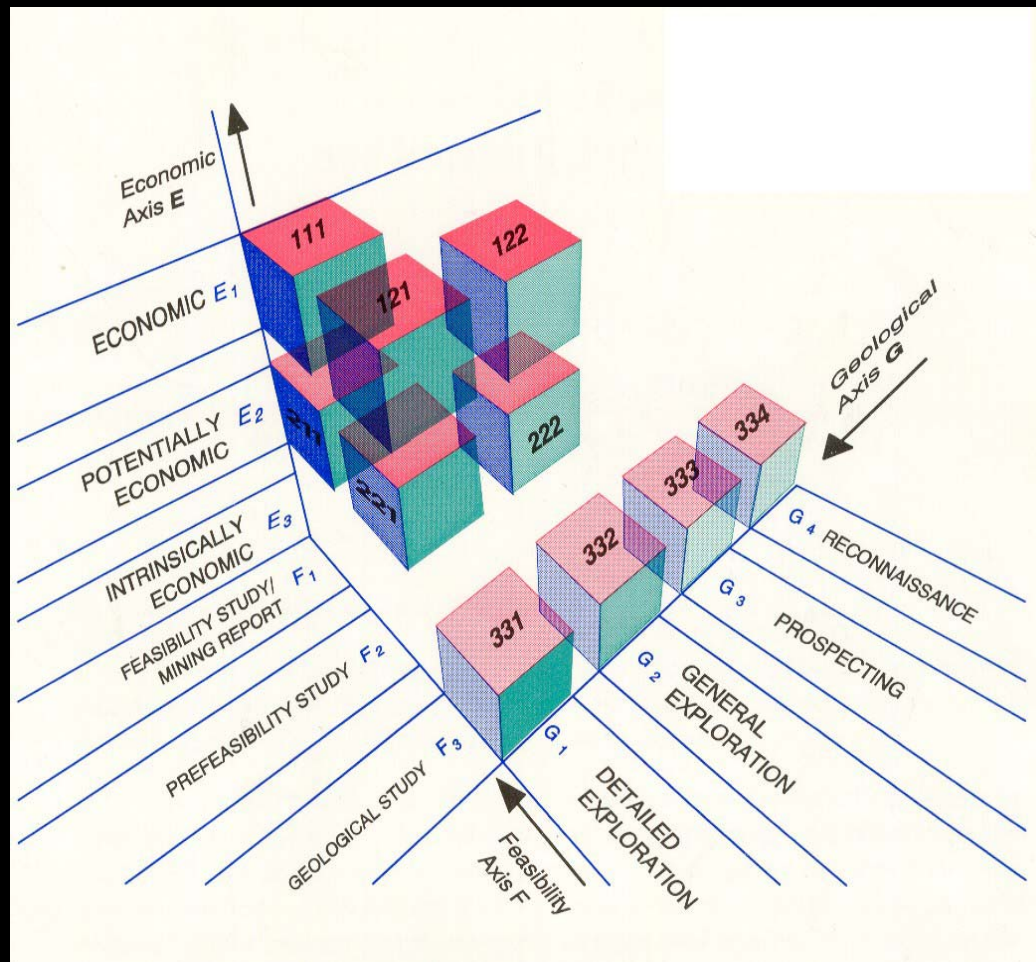
**More efforts are needed to
advance with the application of
UNFC in Africa & Latin America**

Status of the Implementation of UNFC on Coal Deposits- OPEC Member Countries

Country	Organisation	Adoption Nat.Class. to UNFC	Legal Status	Application to coal	Results
Indonesia¹	Directorate General of Geology & Mineral Resources, Dept. of Mines & Energy	adapted	as a national standard (1998)	national minerals and solid fuels inventory campaign	UNFC is seen as a very effective tool, application in progress
Iran¹	Geological Survey of Iran (GSI)	adapted	(Procedure of practical appl. of UNFC has been confirmed by GSI experts)	Iranian Coal Deposits	GSI has appointed an expert group to coordinate all exploration activities

1: by 2001

Examples for the adaptation & the implementation of UNFC



- In UNFC 36 classifications are available in total. 8 of them are used often.
- UNFC is not rigid system. During adaptation National system to UNFC, it is possible to prevent issues in the National System that is useful to remain.

Examples for the implementation of UNFC - Poland black coal resources/reserves of Upper Silesian Coal Basin

(million tons)

UN Framework Classification	Polish System	Detail Exploration	General Exploration	Prospecting	Reconnaissance
		Rozpoznanie szczegolowe A+B	Rozpoznanie wstepne C1*	Poszukiwania C2, D1	Penetracja D2, E(D3)
Feasibility Study and/or Mining Report	Plan Ruchu Zakladu Gorniczego Operat Ewidency Zasobow	(111) 1335			
		(211) 656			
Prefeasibility Study	Project zagospodarowania zloza	(121) 151	(122) 2851	(123) 2515	
		(221) 222	(222) 8805	(223) 9099	
Geological Study, Opportunity Study	Dokumentacja geologiczna zloza	Measured coal resources (331) 1448* 1341**	Indicated coal resources (332) 6760* 5299**	Inferred coal resources (333) 23189* 17880**	Reconnaissance coal resources (334) 74333

* Total geologic (supposed economic and potentially economic)

** Supposed economic only (bilansowe)

Source: M.Niec, M.Piwocki, S.Przenioslo, University of Mining & Metalurgy, Polish Geological Survey

Framework Classification for World Energy Resources Survey

Hungary: Coal Deposits

01.01.2000

		Definitions	Code	10 ⁶ t	10 ⁶ toe
Total Resource	Reserve	Economically extractable quantity, appropriately assessed	111	1826.7	
			121		
			122		
	Remaining/ Additional Resources	Potentially economically extractable quantity, appropriately assessed, which is currently not economic but may possibly be so in future	211	5449.8	
			221		
			222		
	Intrinsically economic in-situ quantity with future economic prospect pending appropriate assessment	331	13687.4		
		332			
		333			
		334			

Source: B.Fodor, Hungarian Geological Survey, Budapest

General Handicaps Faced

- **Problems relating with;**
- dividing the stages of geological investigation into four steps (*as reconnaissance, prospecting, general exploration, detail exploration*)
- not fitting country's Mining Laws with UNFC (*re-evaluation and revision process are needed*)
- difficulty in evaluating "economic viability" because of lack of clear economic criteria for countries in transition
- terminology chaos particularly for "reserve" and "resource"
- classifying in-situ, base reserve, extractable reserves/resources (*usage of letters is recommended*)

Conclusion & Recommendation- Ways of Successful UNFC Implementation

