

URAM-2009

Uranium Production Cycle Subprogramme (1.2.1) Activities

22 June 2009



IAEA

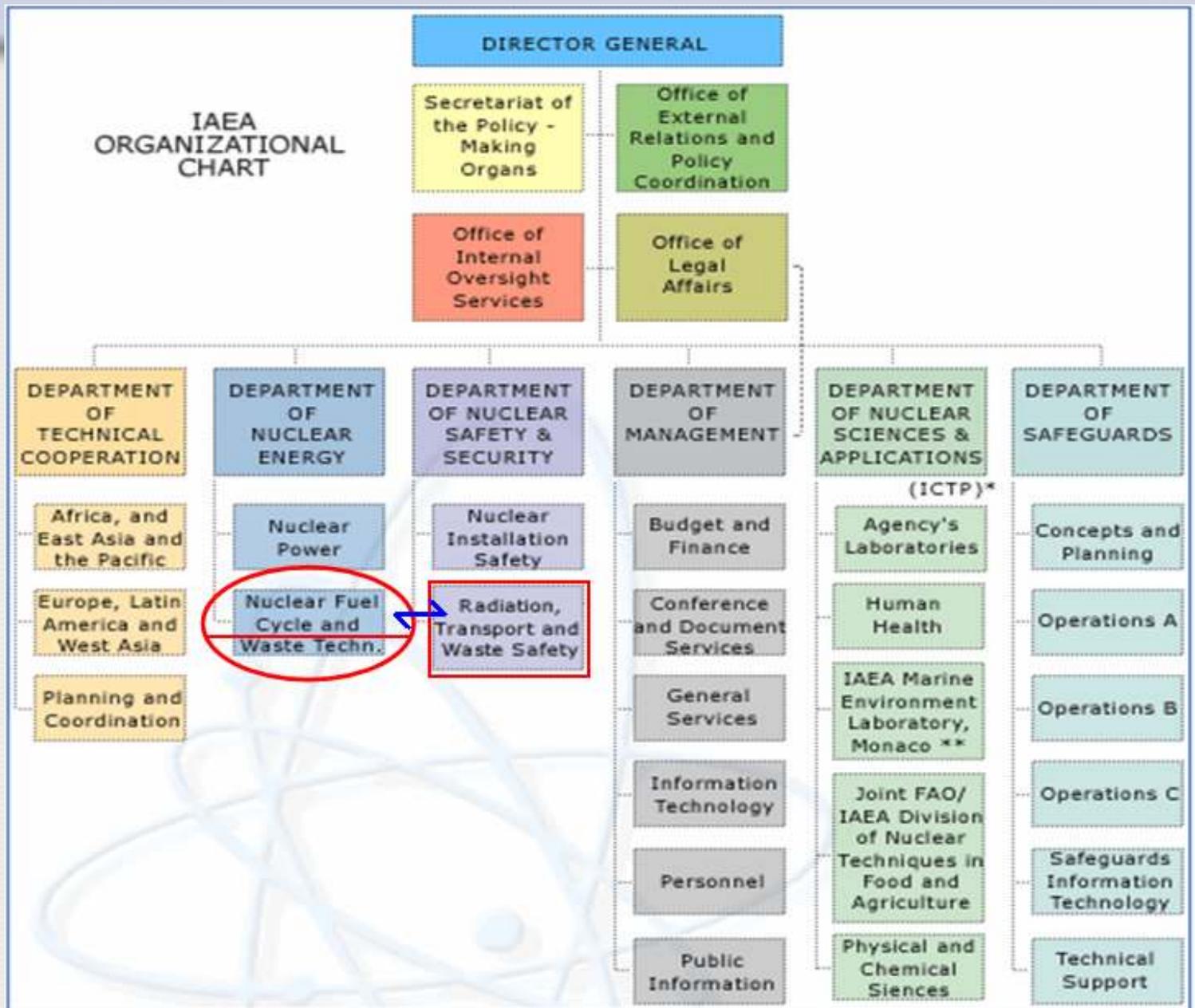
International Atomic Energy Agency

What is the Agency's mission?

The IAEA is an independent intergovernmental organisation in the United Nations family, that serves as the global focal point for nuclear co-operation. It:

- **assists its Member States in planning for and using nuclear science and technology** and facilitates the transfer of technology and knowledgeto ... Member States;
- **develops nuclear safety** standards and promotes the achievement and maintenance of high levels of safety in applications ... and ... the protection of human health and the environment against ionizing radiation;
- **verifies** through its inspection system **that States comply with their commitments** only for peaceful purposes.

The IAEA Organisational Chart



IAEA Subprogramme on Uranium

- IAEA Programme 1.2: Nuclear Fuel Cycle and Materials Technologies
 - Subprogramme 1.2.1: **Uranium Resources and Production, Databases for the Nuclear Fuel Cycle**
 - Project 1.2.1.1: **Updating Uranium Resources, Supply & Demand and Nuclear Fuel Cycle Databases**
 - Project 1.2.1.2: **Supporting Good Practices in Uranium Production**

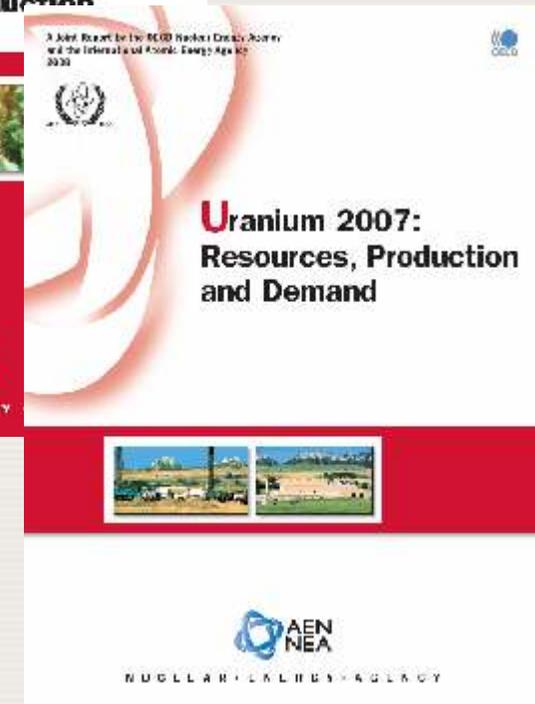
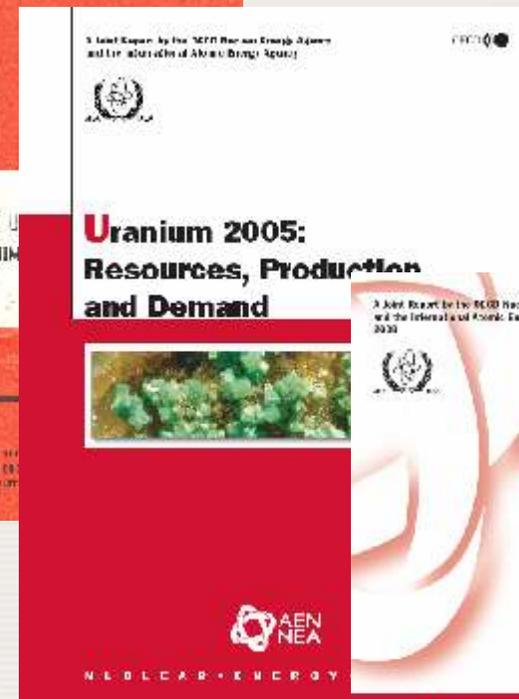
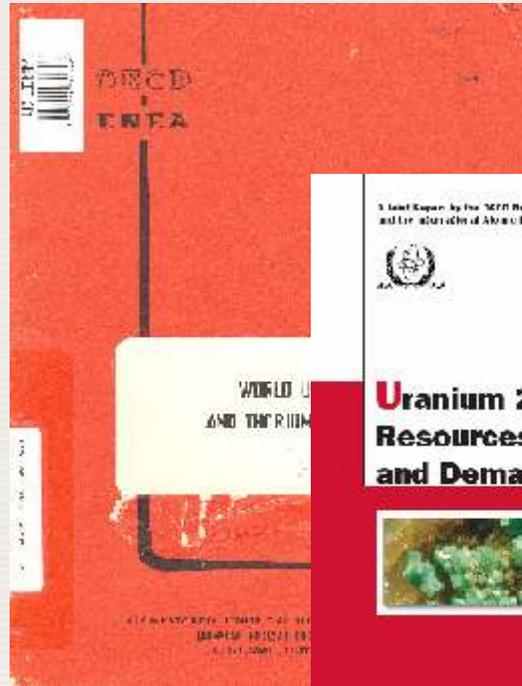
IAEA Subprogramme on Uranium

Project 1.2.1.1: Updating Uranium Resources, Supply & Demand and Nuclear Fuel Cycle Databases

- Uranium Group secretariat & Red Book preparation etc.
- Analysis of Uranium Supply to 2060
- UDEPO content (a database of uranium deposits)
- IAEA Symposium on Uranium (URAM-2009)

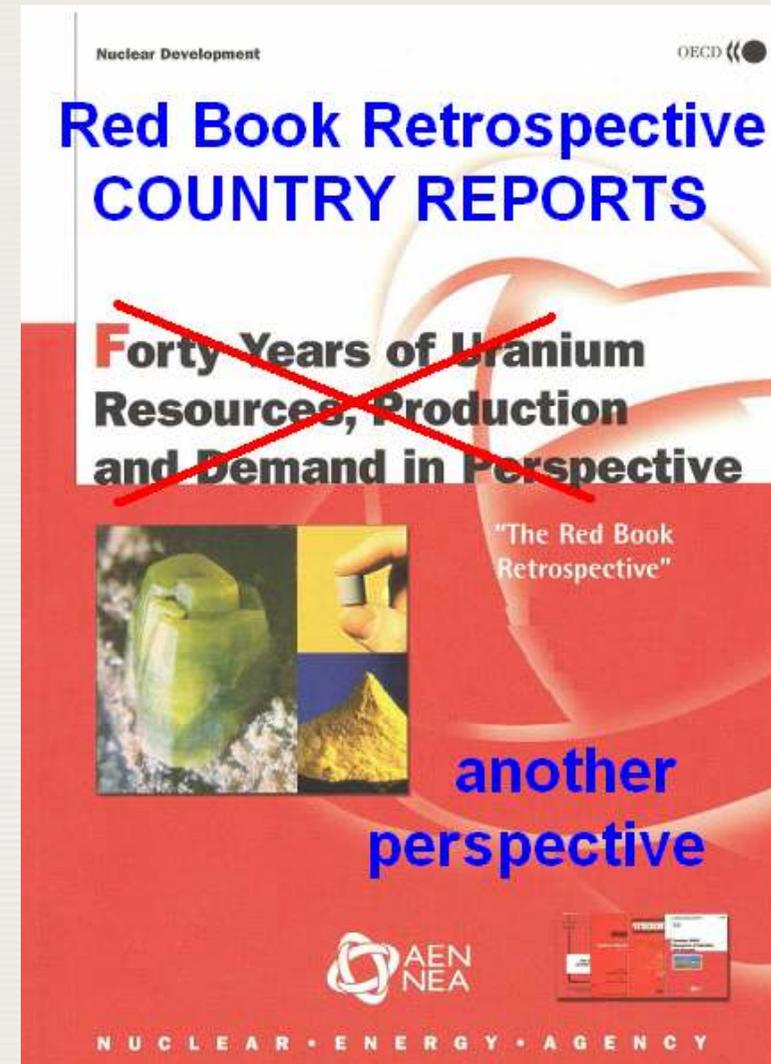
Uranium Resources

- **RED BOOKS** since 1965
- **Uranium 2009: Resources, Production and Demand**
- Sources: governmental reports, secretariat reports and estimates



Uranium Resources

- Forty years of uranium production cycle activities country by country:
- **RED BOOK Retrospective Country Reports**
- Sources: Red Books, IUREP, other (SG open sources?)



Uranium Resources

- **RED BOOK Retrospective Country Reports**
- A spin-off from regular Red Books Country Reports
 - Country by country reports
 - Final format definition
 - Final extent of the publication definition (limitation in pages)
 - Countries definition
 - Core consultant group († Jay McMurray, Jean Rene Blaise, Fritz Barthel, Doug Underhill, Kim Warthan)
 - External consultants to cover particular countries
 - Final editing

Looking for recommendations!!!!

Uranium Resources / RBR-CR

SPAIN

Foreword

Executive Summary

Introduction – Geography

Spain is located at the Iberian Peninsula, of which it occupies approximately 80% (the remaining 20% are occupied by Portugal), in the southwest of Europe. In the north Spain borders on France and Andorra, with the Pyrenees as a natural frontier. Additionally the Balearic Islands (Mallorca, Menorca and Ibiza) in the Mediterranean Sea, Canary Islands in Atlantic Ocean close to the Moroccan coast, and Ceuta and Melilla, located in northern Africa, are Spanish territory.

Area 504 782 km²
 Population 40 448 200 (July 2007 est)
 Capital city Madrid



central plateau has very hot, dry summers and drought is common (C saying is that the climate is "9 months of winter (-5°C) and 3 months of the freezing winters and scorching summers. In Seville, Cordoba and C 50°C. On the southern Mediterranean coast a mediterranean climate p average winter temperature of 14°C.

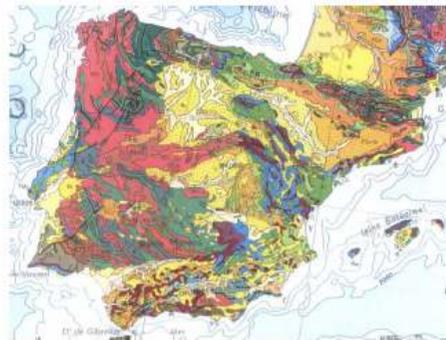
Although Spanish soils need careful irrigation and cultivation, the valuable natural resource with nearly a third of the land available for cu grain, vegetables, olives, wine grapes, sugar beets, citrus fruit, beef, por

The country also has many mineral resources, including hard and and natural gas deposits, iron ore, uranium, mercury, pyrites, fluorspar, copper, and potash. In 2003 production included hard and brown coal (265,000 t), zinc (70,000 t), copper (5,000 t), and lead (2,000 t). Spain i and 2 tons of silver. In addition, 2.4 million barrels of petroleum were e mines are in the northwest, near Oviedo; the chief iron-ore deposits are Santander and Bilbao; large mercury reserves are located in Almadén, i copper and lead are mined in Andalusia.

The majority of Spain's peninsular region consists of the A rimmed and dissected by mountain ranges. Other landforms incl lowland river valleys, the most prominent of which is the Andah. The Meseta Central, a vast plateau in the heart of penin from 610 to 760 m. Rimmed by mountains, the Meseta Centra series of rivers that form some of the border with Portugal. I "dorsal spine" of the Meseta Central, divides the Meseta into former higher in elevation and smaller in area than the latter. Th of Madrid with peaks that rise to 2,400 m north of the city and t Madrid, the Sistema Central shows its highest peak of almost 2, Central, which continue westward into Portugal, display some gl

GEOLOGY OF SPAIN

General



In relation to potentially favourable uranium bearing areas

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URANIUM EXPLORATION

Historical review

First studies on radium-bearing ores were carried out in Spain in 1914 by a French company, on a deposit in the Monesterio region which was worked down to 60m. In 1939, a private company known as BRESA mined pegmatites with brannerite mineralisations in the Sierra Albarrana.

In 1949, the Junta de Energia Nuclear (JEN) reopened the Monesterio works and continued the exploration of that region until 1956. However, it was in 1952 that the JEN launched its extensive exploration programme, concentrating essentially on the provinces of Jaen, Cordoba, Badajoz, Caceres, Salamanca and Zamora. It was at that time that systematic exploration in the Badajoz massif got under way. In the Andujar region, the first indications in the Los Pedroches massif were discovered in 1953, and in May 1954 the most important of them, the La Virgen deposit, was found. A mining division, the oldest for this purpose, was set up.

In the region covered by the Caceres division, p and Albuquerque massifs, on uranium indications that work led to the discovery of the Los Ratones vein successes obtained in the Salamanca region in schists, l to study, and as a result the Val Delayegua zone was dis

In the Salamanca region, systematic study of the discovery of the Villar de Peralonso, Val Demascano a

It was in 1957, that indications in Cambrian-Silu deposits of Fe and Esperanza. Almost all the schist-Zamora region were then studied.

In the meantime, less systematic prospecting wo in various regions outside the Meseta. Indications wer Triassic formations, but without notable results.

Expenditures

	1971 (1)	1972	1973	1974	1975	1976	197
USD	13 336	1 787	1 929	2 576	6 483	7 100	6 8

	1982	1983	1984	1985	1986	1987	198
USD	16 000	10 000	7 000	382	680	990	1.2

	1993	1994	1995	1996	1997	1998	1999
USD	2 872	891	0	1 388	0	0	0

(1) Expenditures in first year of reported data represent spending for all pre

Page 9

Intermedia-Maria Lozano open pits. From 1983 to 1990, a processing plant at site produced yellow cake. The project ceased operation in March 1990, due to an increasing strip ratio and the low uranium price. Remaining in-situ resources are estimated to amount about 2500 tU.



Don Benito uranium mine and mill complex in 1982.

Mazarete

The **Andujar** uranium mill plant was operated from 1959 to 1981, producing uranium concentrate from ore extracted from 24 mines within a 400-kilometers distance from the site (provinces of Badajoz, Cordoba and Jaen). 22 uranium mines were developed by underground mining, and two by open-pit mining. Mining operations started around 1950 and were shut down in 1976. Ore deposits were vein-type deposits in granitic and metamorphic rocks. Ore grade varied from 0.06 to 0.23 % U. The Andujar plant was designed for processing low grade uranium ore (0.15% U) and produced 80% concentrate of U₃O₈ in form of sodium and ammonium urinate at a rate of 60-80 t/yr. A total of 1.22 million t of uranium ore was processed to produce 1 145 tonnes of uranium.

Los Ratones, located in the Caceres region, was mined as a small granite-hosted, vein-type, underground mine between 1959 and 1975. It was mined to a depth of 160m, and worked along strike for 375m. A total of 125 000 tonnes of ore were extracted, grading 0.192 % U, to produce 240 tU. The principal uranium mineral was massive pitchblende associated with iron sulphides in quartz veins. Other small mines in the same area, include La Carretona, Las Perdizes, La Dehesilla, El Penascal, La Dehesa del Medico and Casa del Gallo.

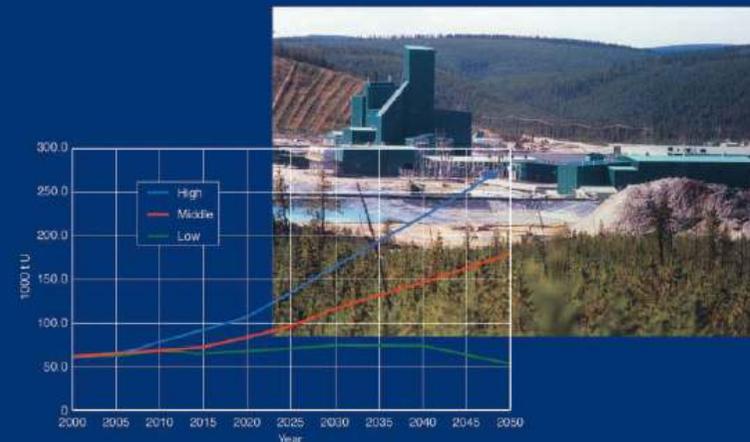


Uranium Resources

- Fifty year outlook on availability of uranium resources – an update and upgrade
- **Analysis of Uranium Supply to 2060 (and maybe longer)**
- Sources: Red Books, IUREP, internet,



Analysis of Uranium Supply to ~~2050~~ **2060**



Uranium Resources / U2060

- **Analysis of Uranium Supply to 2060**
 - Core consultant group († Jay McMurray, Jean Rene Blaise, Fritz Barthel, Doug Underhill)
 - **Supply**
 - Production centres definition
 - Production costs sorting
 - Priority sorting
 - Other aspects (secondary sources)
 - **Total resources/reserves 15 million tU**
 - **Demand scenarios definition** (comparison of different sources)
 - Looking for consultants to comment on
 - Filling demand by sorted supply (production centres + others)
 - Secondary sources availability definition
 - Final comments & editing
- Looking for experts!!!!**

Uranium Databases

Integrated Nuclear Fuel Cycle Information Systems (INFCIS) - Microsoft Internet Explorer provided by IAEA

http://www.nfcis.iaea.org/INFCISMain.asp?right=Navigator

File Edit View Favorites Tools Help

Integrated Nuclear Fuel Cycle Information Systems (I...

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INFCIS

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NFCIS | UDEPO | PIE | NFCSS | MADB | Projects

Integrated Nuclear Fuel Cycle Information Systems

The INFCIS web site is designed as a "one stop" resource for technical and statistical information about nuclear fuel cycle activities worldwide, as reported to the IAEA. The system includes four databases and one computer simulation system published by the IAEA's Nuclear Fuel Cycle and Materials Section in the Division of Nuclear Fuel Cycle and Waste Technology.

User: Tan Szeak

Logout

See User Info.

Nuclear Fuel Cycle Information System (NFCIS) covers civilian nuclear fuel cycle facilities around the world. It contains information on operational and non-operational, planned, and cancelled facilities. All stages of nuclear fuel cycle activities are covered, starting from uranium ore production to spent fuel storage facilities.

World Distribution of Uranium Deposits Database (UDEPO) covers uranium deposits around the world, drawing on reports to IAEA technical meetings and other sources. It includes classification of deposits, technical information about the deposits, detailed geological information about regions, districts and deposits.

Post Irradiation Examination Facilities Database (PIE) is derived from a catalogue of such facilities worldwide that the IAEA issued in the 1990s. It includes a complete survey of the main characteristics of hot cells and their PIE capabilities.

Nuclear Fuel Cycle Simulation System (NFCSS) is a scenario based simulation system to estimate long-term nuclear fuel cycle material and service requirements as well as material arisings. The code uses simplified approaches to make estimation.

Minor Actinide Property Database (MADB) is a bibliographic database on physico-chemical properties of selected Minor Actinide compounds and alloys. The materials and properties are selected based on their importance in the advanced nuclear fuel cycle options.

NFCIS

UDEPO

PIE

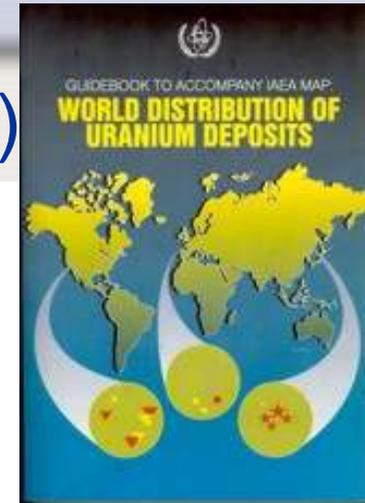
NFCSS

MADB

Local intranet

Uranium Databases

- **UDEPO** (a Database of Uranium Deposits)





IAEA
International Atomic Energy Agency

World Distribution of Uranium Deposits

List of Uranium Deposits (*)

Deposit Type ?

Deposit Status ?

Country

Name contains:

Total **858** records found in **43** pages. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Export To Excel

Deposit Name	Deposit Type	Deposit Status	Country
Abakorum	Sandstone - Tabular	Dormant	Niger
Abankor	Vein	Dormant	Algeria
Abbe	Sandstone - Tabular	Depleted	United States of America
Acehucho Ceclavin	Unknown	Unknown	Spain
Adamovskoye	Other	Dormant	Ukraine
Adrasman	Vein	Depleted	Tajikistan
Agashskoe	Vein	Dormant	Kazakhstan
Agdinskoye	Metasomatite	Dormant	Russian Federation
Aqnew Lake	Quartz-pebble Conglomerate	Depleted	Canada
Agron	Sandstone - Roll Front	Operating	Uzbekistan
Akola	Sandstone - Tabular	Operating	Niger
Akouta Nord	Sandstone - Tabular	Operating	Niger
Akouta Sud	Sandstone - Tabular	Dormant	Niger
Aktau	Sandstone - Roll Front	Dormant	Uzbekistan
Al-Abiad	Phosphorite	Unknown	Jordan

Uranium Databases

World Distribution of Uranium Deposits (UDEPO) - Microsoft Internet Explorer provided by IAEA

http://www-nrcis.iaea.org/UDEPO/JDEPOMain.asp?Region=The%20World&Country=All&Type=Henatite%2CBreccia%20Complex&Status=All&Order=18

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NFCIS | UDEPO | PIE | NFCSS | MADB | Projects

UDEPO World Distribution of Uranium Deposits

Deposits | Statistics | Country Report | Help

User: Jan Slezak

UDEPO Deposit Report

Deposit : Olympic Dam

Olympic Dam

General Info. | Technical Info. | Geological Info. | References | Images

General Information	
Deposit Name	Olympic Dam
Geological District	Stuart Shelf
Geological Region	Gawler Craton / Stuart Shelf
Political/Geographical Province	South Australia
Country	Australia
Last Update	1/1/2015
Companies	
Ownership	100%, WMC Resources Ltd (BHP Billiton)
Operator	WMC Resources Ltd (BHP Billiton)

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Uranium Databases

The screenshot shows a web browser window displaying the UDEPO (World Distribution of Uranium Deposits) website. The page title is "UDEPO World Distribution of Uranium Deposits". The user is identified as "User Jan Slezak". The main heading is "UDEPO Deposit Report". The deposit selected is "Olympic Dam". Below this, there are navigation tabs for "General Info.", "Technical Info.", "Geological Info.", "References", and "Images". The "Technical Information" section is expanded, showing a table with the following data:

Parameter	Value
Tonnage Range (t U)	> 100,000
Grade Range (% U)	0.03 - 0.05
Deposit Status	Operating
Name of the Processing Facility	
Cumulative Production (t U)	31200
Production Period	Total production 1988 to 31 Dec. 2004
Produced Grade (% U)	
General Remarks	

At the bottom of the page, there is a "Back" link, a timestamp "This page was retrieved on 2009-02-10.", a link to "Send your comments to responsible officer.", and a copyright notice "© 2003-2007 International Atomic Energy Agency." The browser's status bar at the bottom indicates "Local intranet" and "100%".

Uranium Databases

World Distribution of Uranium Deposits (UDEPO) - Microsoft Internet Explorer provided by IAEA

http://www-nfcis.iaea.org/UDEPO/UDEPOMain.asp?Region=The%20World&Country=All&Type=Hematite%20Breccia%20Complex&Status=All&Order=18

World Distribution of Uranium Deposits (UDEPO)

User Jan Slezak

UDEPO Deposit Report

Deposit : Olympic Dam

Olympic Dam

[General Info.](#) [Technical Info.](#) [Geological Info.](#) [References](#) [Images](#)

Geological Information

Deposit Type	Hematite Breccia Complex
Geological Setting	<p>Lithology: The deposit occurs within granitic rocks of the north-eastern portion of the Gawler Craton, where a sequence of undeformed Neoproterozoic and Cambrian marine platform sedimentary rocks unconformably overlies the Gawler Craton.</p> <p>Tectonics: Individual breccia bodies in the northern and north-western parts of the breccia complex trend north-west and dip steeply, reflecting larger scale contemporaneous strike-slip faulting.</p> <p>Alteration: hematite, sericite, chlorite, barite, siderite and fluorite</p> <p>Hostrock Age: 1588+/-4Ma</p>
Age of Mineralization	Mesoproterozoic
Mineralization	<p>Ore Mineralogy: chalcopyrite, bornite, chalcocite, pitchblende, coffinite, brannerite, gold, silver</p> <p>Mineralization Description: Ore grade copper-uranium-gold-silver mineralisation forms a large number of ore zones mostly within and hematite breccias and hematite-granite breccias.</p> <p>Ore Controls: Orebody occurs within the hematite-rich Olympic Dam Breccia Complex which is a large hydrothermal breccia complex entirely within the Roxby Downs Granite.</p>

Local intranet 100%

Uranium Databases

World Distribution of Uranium Deposits (UDEPO) - Microsoft Internet Explorer provided by IAEA

http://www-nfciis.iaea.org/UDEPO/UDEPOMain.asp?Region=The%20World&Country=All&Type=Hematite%20Breccia%20Complex&Status=All&Order=1&

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World Distribution of Uranium Deposits (UDEPO)

UDEPO Deposit Report

Deposit : Olympic Dam

Olympic Dam

[General Info.](#) [Technical Info.](#) [Geological Info.](#) [References](#) [Images](#)

Images/Photos

Images

- [1. Simplified geological plan of the Olympic Dam Breccia Complex](#)
- [2. Simplified geological cross-section of the Olympic Dam Breccia Complex](#)

Simplified geological plan of the Olympic Dam Breccia Complex

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Local intranet 100%

IAEA Subprogramme on Uranium

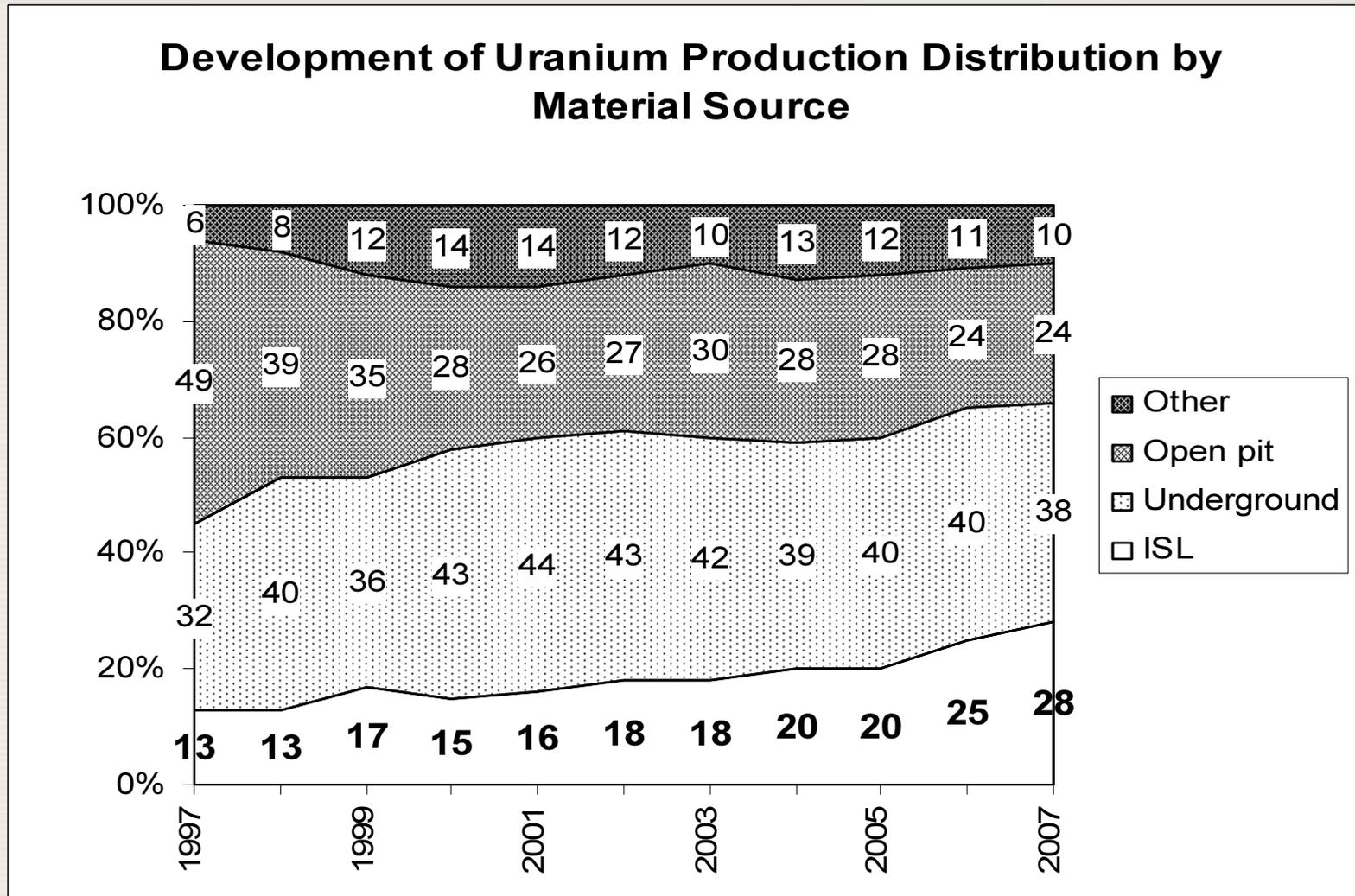
Project 1.2.1.2: Supporting Good Practices in Uranium Production

- Uranium exploration
- Uranium mining & milling technologies
- Uranium mining and milling products/wastes (with WTS)
- Remediation after uranium mining and milling and their closure (with WTS & WES)

all of them including **ENVIRONMENTAL TASKS**

Uranium Production

Development of Uranium Production Distribution by Material Source



Good Practices in Uranium Production

Finalizing documents on:

- Best Practice in Environmental Management of Uranium Mining
- Establishment of Uranium Mining and Processing Operations in the Context of Sustainable Development
- Radioelement Mapping

to be issued as NE documents

Good Practices in Uranium Production

Preparing documents on:

- **Best practices in uranium mining, milling and production**
- Uranium exploration, highlighting advanced aerial and ground geophysical techniques
- **Historical in-situ leach mining operations**

IAEA Meetings in 2008

- CS on **URAM-2009** preparation, 1 April 2008, Vienna, Austria
- CS on **UDEPO**, 2-4 April 2008, Vienna, Austria
- **42st Uranium Group Meeting**, 13-17 June 2008, Adelaide, South Australia, Australia
- TM on **Implementing the Best Practices in Uranium Mining, Milling and Production**, 15 – 17 October 2008, Vienna, Austria
- CS on **Analysis of Uranium Supply to 2060 and Red Book Retrospective – County Reports**, 3 -7 November 2008, Vienna, Austria

IAEA Meetings in 2008

- TC (RLA 3006) Training Course on **Remediation after Uranium Production**, 3-7 November 2008, Buenos Aires, Argentina
- TM on **Uranium Exploration, Mining, Production, Mine Remediation including Environmental Issues**, 17 - 21 November 2008, Amman, Jordan
- TC (RLA 3006) Meeting on **Uranium Exploration, Mining, Production, Mine Remediation including Environmental Issues**, 24 - 28 November, Salvador, Brazil
- TC (RLA 3006) Training Course on **Environmental management Systems in Uranium Mining and Processing**, 1-5 December 2008, Lima, Peru

IAEA Meetings in 2009

- CS on **URAM-2009** preparation, 28-30 January, Vienna, Austria
- CS on **UDEPO**, 25-27 March 2009, Vienna, Austria
- TC (RAF 3007) Meeting on coordination of the project, 23 – 27 March 2009, Maputo, Mozambique
- **43rd Uranium Group Meeting**, 17-19 June 2009, Vienna, Austria
- **International Symposium on Uranium**, 22-26 June 2009, Vienna, Austria
- TC (RAF 3007) Training Course **on Infrastructure for Uranium Mining and Processing**, 17-21 August 2009, Swakopmund, Namibia

IAEA Meetings in 2009

- TC (RLA 3006) Training Course on **Uranium Geology and Exploration**, 28 September – 9 October 2009, Pocos de Caldas, Brazil
- **44th Uranium Group Meeting**, 28-30 October 2009, Paris, France
- CS on **Uranium from Unconventional Resources**, 2-6 November 2009, Vienna, Austria
- TM on **Uranium from Unconventional Resources**, 3-6 November 2009, Vienna, Austria
- CS on **Analysis of Uranium Supply to 2060**, 9-11 November 2008, Vienna, Austria

IAEA Meetings in 2009

- CS on **Red Book Retrospective – County Reports**, 12-13 November 2008, Vienna, Austria
- TC (RLA 3006) Meeting on **Project coordination**, 7-11 December 2009, Lima, Peru

Past training events

Training events	Year	Host country	Region
Uranium Exploration and Evaluation	1969	Argentina	Latin America
Uranium Ore Analysis	1970	Interregional	Spain
Uranium Exploration and Evaluation	1974	India	Asia
Geochemical prospecting for Uranium	1975	Austria	Interregional
Geochemical prospecting for Uranium	1977	Yugoslavia	Interregional
Uranium Exploration and Evaluation	1978	USA	Interregional
Uranium Exploration Methods	1981	Bolivia	Latin America
Uranium Ore Processing	1981	Yugoslavia	Interregional
Uranium Exploration Methods	1982	Madagascar	Interregional

Past training events

Training events	Year	Host country	Region
Uranium Exploration and Evaluation	1969	Argentina	Latin America
Uranium Deposit Evaluation	1983	Yugoslavia	Interregional
Uranium Ore Processing	1983	Spain	Interregional
Processing of Uranium – from Mining to Fuel Fabrication	1984	France	Interregional
Exploration Drilling and Ore reserves Estimation	1985	Brazil	Interregional
Exploration Drilling and Ore reserves Estimation	1991	India	Asia
Computerized databases in Mineral Exploration and Development	1993	Zambia	Africa

Past training events

Training events	Year	Host country	Region
Spatial Data Integration for Uranium Exploration, Resource Assessment and Environmental Studies	1993	China	Asia
Uranium Mining: Its Operation, Safety and Environmental Aspects	1995	France	Middle East & Asia
Uranium In Situ Leaching: Its Planning, Operation and Restoration	1998	USA	Interregional
Uranium Geology, Exploration and Environment	1990s	Canada	Interregional

IAEA Technical Cooperation

Subprogramme 1.2.1: Uranium Resources and Production, Databases for the Nuclear Fuel Cycle

supports Technical Cooperation projects within the area of

Uranium Production Cycle



Ongoing TC Projects

Country/Region	Title of the Technical Cooperation Project
Argentina	Geology Favourability, Production Feasibility and Environmental Impact Assessment of Uranium Deposits to be Exploited using In Situ Leaching Technology
China	Study of the Key Problems in Prospecting for Sandstone-Type Uranium Deposits and their Amenability to In-Situ Leach (ISL) Mining in the Basins in Northern China
Egypt	Airborne and Ground Gamma-Ray Spectrometry for Radio-element Mapping for Environmental Purposes and for Exploration of Uranium Resources
Pakistan	Uranium geochemistry, mineralogy and host rock uranium deposit description
Regional Latin America	Regional Upgrading of Uranium Exploration, Exploitation and Yellowcake Production Techniques taking Environmental Problems into Account

Starting TC Projects

Country/Region	Title of the Technical Cooperation Project
Algeria	Contribution to the development of activities for the processing of Algerian ores and purification of uranium concentrates
Brazil	Practical guidance tools for nuclear safety analysis of remediation and decommissioning actions of the first uranium ore mining and milling facility in Brazil
China	Techniques And Methods For Optimization Of Uranium Exploration in Both Sedimentary and Volcanic Basins
China	Integrated assistance to institutions supporting nuclear power programme
Egypt	Evaluation of some selected uranium resources in Egypt and production and purification of the yellow cake
Jordan	Uranium exploration
Jordan	Uranium extraction
Regional Africa	Strengthening regional capabilities for uranium mining, milling and regulation of related activities
Venezuela	Exploración de los recursos uraníferos de Venezuela

Outlook into 2010-11:

- Ongoing activities:
 - Red Books 2009, 2011
 - Red Book Retrospective – Country Reports to be published
 - Analysis of U supply to 2060 to be published
 - UDEPO
 - UPC economics
 - Best practice in UPC
 - TC support (14 TCPs)

Outlook into 2010-11:

- New tasks added:
 - Uranium production economics, full-cost accounting and the reality of market based economy
 - Database on Th deposits (ThDEPO)
 - Processing and purification of U and Th from conventional and unconventional resources
 - Optimization of ISL technology
 - Organize training programme on uranium production cycle
 - A network on UPC training and education

IAEA Meetings in 2010

2010	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu								
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
January					OH														CTO																			
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February								AL	AL	AL	AL	AL													CTO													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
March												CTO																										
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April					OH				OH										CTO																			
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May																			CTO																			
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June																																						
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July					CTO																																	
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
August															AL	AL																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
September																																						
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October																																						
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November																																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
December																																						
SLEZAK	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	

IAEA Meetings in 2011

2011	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	
January						1	2	3 OH	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21 CTO	22	23	24	25	26	27	28	29	30	31		
February		1	2	3	4	5	6	7	8	9	10	11 CTO	12	13	14	15	16	17	18	19	20	21 AL	22 AL	23 AL	24 AL	25 AL	26	27	28	29	30	31						
March																																						
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SLEZAK	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	

Consulting groups

- ISL
- UDEPO
- ThDepo
- Exploration
- Uranium Supply to 2060
- RBR – Country Reports
- Training & Education in UPC
- Resources classification, estimation, administration, reporting.....

THANK YOU FOR YOUR ATTENTION

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Nuclear Fuel Cycle & Materials Section

**Division of Nuclear Fuel Cycle and Waste
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