第8章 アルバニア鉱業セクター開発促進のマスタープラン

これまでに述べた調査を構成する 3 分野の分析により、以下のような現状が明らかにされた。

- ▶ 投資環境全般については、国際機関等により近年その改善が報告されており、「ア」国政府の行ってきた対策は高く評価されている。改善の牽引力となっているのは広範な分野において進められている EU 基準への適合に向けた活動である。
- ▶ 鉱業セクターにおいても、新鉱業法の制定、開発重点地域の明確化などが進行中である。これらに付随して、許認可手続きの効率化や、外資招致のワンストップ・サービスをする機関が実際に活動を開始し、鉱業セクターをカバーしている。「ア」国は EITI の候補国となっているが、本加盟に向けた準備も進行中である。
- ▶ 鉱山開発の国際テンダーが行われ、新たに中国・トルコの合弁企業と鉱山開発の契約が交わされた(2010年6月)。この他、海外企業による7件の探鉱が進行中である。
- ▶ 上記のような改善は、これまでに策定された政府目標がある程度実現されてきたものとみることができるが、一方、目標として掲げられながら、2009 年 6 月末の総選挙以降の国会審議の停滞あるいは慢性的な財政困難により、実現されていない部門がある。
- > 実現の遅れは、鉱業活動のモニタリングと法令遵守の不徹底、情報公開への IT 技術利用 (GIS データベース) において指摘されている。また、モニタリングや EITI 活動に不可 欠な化学分析・品位分析の需要の増大が見込まれているのに対し、その対応が懸念される。 これらの遅れは、進展中の投資環境一般の改善による効果を減じることになりかねない。

このため、今後この格差(ギャップ)を解消するように、優先順やバランスに配慮しつつ 注意深く鉱業セクターの振興戦略を構築し、キャパシティ・デベロップメントを強化するこ とが必要である。本調査により明らかになった上記の問題を克服し「ア」国の国家経済開発 に貢献するための鉱業開発促進のマスタープランとして以下のように提案する。

本マスタープランが、新鉱業法の発足に伴い今後「ア」国政府によって策定が見込まれるロードマップに活用されることを期待する。

バルカン地域には過去の鉱業活動による負の遺産が多く存在しているが、「ア」国においてはその度合いが相対的に軽いといえるので、健全な鉱業政策の実践によりこの桎梏から脱却し、国民が鉱物資源開発の恩恵に浴する日が近い将来に到来する可能性がある。また、さらには、「ア」国自らがバルカン地域において展開されている鉱業セクターの地域間の交流や協力に貢献することが期待される。

8-1 8章

「ア」国鉱業セクター開発のマスタープランの基本概念

「ア」国の鉱業セクター振興推進の基盤となる資源は、かつて中央計画経済体制の下に隆盛をみた鉱業の歴史とこれまでに蓄積された調査データであると考えられる。鉱業の国家経済への貢献は「ア」国の人々に記憶されており、今後のさらなる経済開発の推進役を鉱業セクターに期待することにも現れている。一方、環境汚染、鉱山に過度に依存した地域社会の歪みなどが、市場経済への移行やEU加盟のための努力を通じて認識されるようになった。

鉱業振興マスタープラン調査においては、GIS の強化・情報発信、鉱業セクターに共通する 課題、有望鉱種の開発戦略の三分野について分析をおこない、今後の鉱業セクター振興のマ スタープランを策定することとした。これら三分野について相互の関連を検討し、今後の鉱 業セクター振興のためのマスタープランのありかたとして以下のように提言する。

- GIS・データベースの強化は、単に既存データの整理収納の合理化にとどまらず、鉱業権の許可条件の照合や鉱区の管理を支える基本的なツールとしての要求に応えるものである。鉱業活動は土地の利用や権益と直結しており多くのステークホルダーが関与するため、他の経済活動にくらべて格段に複雑であり、「ア」国の他省庁のIT化に比べて鉱業セクターでの実用化は遅れているのが現状である。投資促進に直結する情報発信の実際的な手段としても強化が急がれるものである。また、地質条件や鉱業の歴史に共通点の多いバルカン地域の国際交流のためにも GIS・データベースの利用は不可欠となっている。このため、本調査においては GIS・データベースの概念設計を支援したが、今後の実際の構築とその運用を確実なものとするためのキャパシティ・デベロップメントが必要である。
- 鉱業セクター共通課題のアクションプログラムでは、鉱業活動に関わる多方面の要素について分析と提案を行った。とくに強調されるべき点は、行政組織をはじめ民間企業、地域コミュニティを含む広汎なステークホルダーの参加による鉱業戦略の合意、また、それらの実施の分担と責任の明確化である。主管官庁である経済・貿易・エネルギー省のみについてみても、部署間の連携は希薄である。その理由は、歴史的なトップダウンや財政困難による職員数の絶対的な不足のようであるが、その改善には忍耐強い努力と改革が必要であろう。現在進められている EITI (採取産業の透明化イニシァティブ) についてみても、基本となる取引の透明化の実現には遵法確保の徹底が不可欠であり、これも単に鉱業セクターにととまらずいわゆる全般的な社会水準の向上と相俟ってはじめて達成されるものであろう。
- 有望鉱種の開発戦略としては、「ア」国の比較優位にある鉱種としてクロム、銅、ニッケル、石材などの非金属鉱物が対象に挙げられる。この中で最も開発の進んでいるのはクロムであるが、小規模な鉱床が多いという資源賦存状態の特性から、必ずしも大型投資による大量採掘が経済的に有利とは限らない点に注目して、「ア」国が優位に開発できる余地が期待される。銅やニッケル資源にもその可能性に注目して、海外から探査や開発の投資が見られるようになった。これらの投資が成功して資源が開発され、それが「ア」国政府の収入に繋がるよう、投資の保護を含む合理的な契約、制度が適用されることが必要である。一つの成功例が確立されれば今後さらに「ア」国の資源開発への投資が注目されるようになるであろう。
- 鉱業セクターの振興には、鉱業戦略や鉱業主管官庁の役割が重要であることは論をまたないが、常に指摘されるのは、十分な活動や役割遂行に必要な財源の不足である。経済・貿易・エネルギー省傘下の AKBN や AGS は、ロイヤリティをはじめとする鉱業収入をその活動財源に留保することがこれら組織の設置法に明記されているので、ひとたび鉱業生産が実現され、国庫への鉱業収入が確保されれば、財政問題の好転が期待できる。これは、EITI の実現に期待されている最大の成果であろう。本調査で提案している鉱業セクター共通課題のアクションプログラムは、その実行には多くの課題が予想されるが、忍耐強く地道に取り組む価値のあるものである。

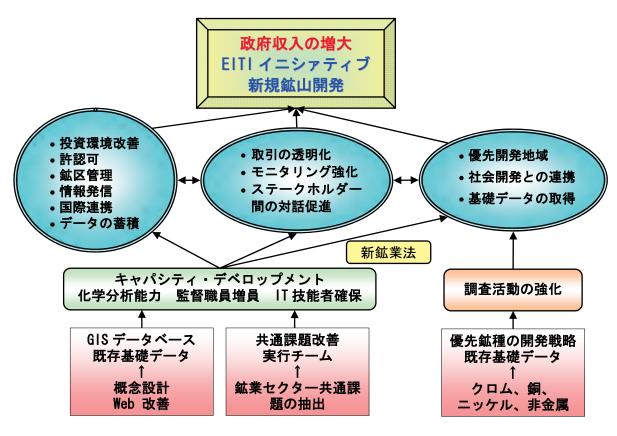


図 8.1 アルバニア国鉱業セクター開発のマスタープランの基本概念

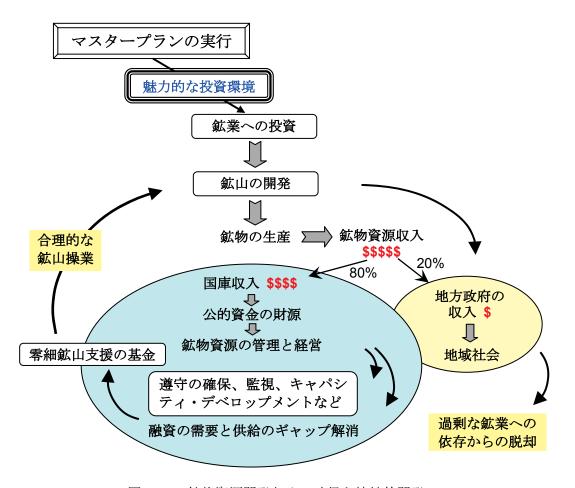


図 8.2 鉱物資源開発収入の確保と持続的開発

8-3 8章

表 8.1 アルバニア鉱業振興マスタープラン

	2011	2012	2013	2014	2015	2016
組織制度と法的枠組み						
戦略実行チームの設立						
3 ヵ年計画、年次行動計画						
二次立法.						
EITI の実行						
関係者の協力強化のための鉱業戦略顧問団の設立						
AKBN / AGS の能力強化の職員採用.						
外国からの投資誘致の活動						
訓練計画 – AKBN / AGS の能力強化.						
開発戦略 – クロム						
一貫体系の開発案の策定(採掘ー選鉱ー冶金)	_					
既存契約の履行確保の強化						
採掘免許の件数の削減.						
大型コンセッションの競争入札向けの地域の選定						
選鉱プラントの効率化						
小規模総合の共同化の推進						
大型コンセッションの競争入札						
大規模クロム鉱山の拡張				L]]]	_
開発戦略 – 銅						
既存鉱山の効率の改善						
既存選鉱プラントの効率改善	_					
基本的探査 (空中物理探査等)/ 鉱床モデルの確立						
亜鉛と鉛 (銅を含めて)の回収による付加価値増加						
選鉱廃さいの再処理による亜鉛と鉛の回収						
民間企業による探査の促進						
コンセッションの入札						
銅鉱山の採掘操業拡張						_ L __
	2011	2012	2013	2014	2015	2016

政府によって実行されるもので、経常予算で対応可能なもの事前の予算措置により政府が実行するもの(財源がクリティカル・ポイントとなる)政府と民間の共同により実行され、特にステークホルダーの対話が必要となるもの政府の支援により実行可能性が検討され、民間により実施されるべきもの

8-4 8章

	2011	2012	2013	2014	2015	2016
開発戦略 – ニッケル						
国内のニッケル処理プラントの詳細計画の検討						
回収設備への投資の民間投資の関心喚起						
民間の鉱業活動の奨励 (Lura-Kukes)						
処理設備の建設契約の入札.						
大規模コンセッションの入札						
処理設備の建設						
大規模ニッケル鉱山の操業拡大						
処理設備の運転						
GIS - データベース						
GIS データベースの共用のための手続き (AGS/AKBN)						
詳細設計、ソフトウエアのカスタム化						
段階的な GIS の開発						
AGS と AKBN の GIS チームのための新人採用						
GIS の詳細にわたる訓練と CD						
環境、衛生および安全、社会配慮						
METE/MEFWE 連携強化のメカニズム						
小規模鉱山の衛生および安全の改善計画						
監視監督の人員増強のための新人採用						
監視のための訓練と CD						
鉱業汚染ホットスポットの優先度評価						
歴史的鉱業汚染ホットスポットの修復						
	2011	2012	2013	2014	2015	2016

調査期間中の「ア」国の主な動き

第1次現地調査(2009年6月):直後に総選挙

第2次現地調査(2009年8月~10月):

METE のプロジェクト責任者、主要機関である AKBN のトップの交替

第5次現地調査(2010年6月~7月):

METE の組織改正、新鉱業法案の国会本会議承認(7月15日)、AKBN で組織改組検討開始第6次現地調査(2010年10月)

METE、AKBN のトップの交代

8-5

付属資料

- 1. インセプションレポート協議議事録
- 2. 第2次現地調査終了時の覚書
- 3. 第3次現地調査終了時の覚書
- 4. 第5次現地調査終了時の覚書
- 5. 第6次現地調査終了時の覚書
- 6. アルバニア国参加機関の組織図
- 7. PDAC 総会(国際セミナー)発表
- 8. 本邦セミナー開催
- 9. 参考文献および参考情報

MINUTES OF MEETING ON THE FIRST STEERING COMMITTEE FOR THE STUDY FOR THE MASTER PLAN FOR PROMOTING THE MINIG INDUSTRY OF ALBANIA

AGREED UPON BETWEEN
THE MINISTRY OF ECONOMY, TRADE AND ENERGY
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Tirana, June 15, 2009

不由方

Mr. Yoshiaki Shibata

Team Leader

ЛСА Study Team

Dr. Kristo Rodi

General Director, Directorate of Regulations

Directorate General of Regulation

Ministry of Economy, Trade and Energy

In accordance with the Scope of Work for "The Study for the Mater Plan for Promoting the Mining Industry of Albania" (hereinafter referred to as "the Study") agreed upon between the Ministry of Economy, Trade and Energy. (hereinafter referred to as "METE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on March 5, 2009, JICA dispatched the Study Team (hereinafter referred to as "the Team") headed by Mr. Yoshiaki Shibata and composed of members from Mitsubishi Materials Techno Corporation and Kokusai Kogyo Co., LTD. to the Republic of Albania. JICA members have also been dispatched on the commencement of the Study.

The Team submitted the Inception Report (hereinafter referred to as "Ic/R"), and series of discussions were made at the time of submission. The following are the main points discussed in the meetings. The list of attendants is attached as Annex I.

1. Acceptance of Inception Report:

The Team explained the contents of Ic/R and submitted 10 copies in English to METE. METE has in principle accepted the contents of Ic/R. Both sides confirmed the following matters:

- 1) The Albanian side recognized the importance of cooperative work through on-the-job training and working group, and has decided the personnel of counterpart members.
- 2) Both sides agreed the work contents of the Study and that the Master Plan will be prepared by cooperative work. The Albanian side acknowledged that to experience the process of preparing the Mater Plan is a essential part of capacity development.

2. Members of Steering Committee

The Albanian side informed that the following members listed in Annex II were assigned to the Steering Committee, and the Team acknowledged the appointment.

3. Member of working group

The Albania side informed that the following members listed in Annex III were appointed as the working group member, and the Team acknowledged the appointment.

The Team prepared revised organization charts as given in Annex IV.

5. Undertaking of the Albanian Side:

The Team acknowledged the undertakings provided by Albanian side in accordance with the Scope of Work on March 5, 2009 between both sides. The Team confirmed the undertakings of Albanian side for preparing office space in Tirana.

ANNEX I: LIST OF ATTENDANTS

ALBANIAN SIDE

- 1. Mr. Kristo Rodi
- 2. Ms. Mimoza Simixhiu
- 3. Mr. Musli Dardha
- 4. Mr. Milo Kuneshka

JAPANESE SIDE

(STUDY TEAM)

- 1. Mr. Yoshiaki Shibata
- 2. Mr. Minoru Fujita
- 3. Mr. Masatsugu Okazaki
- 4. Mr. Ken Nakayama
- 5. Mr. Hiroshi Hyodo

(Japan International Cooperation Agency, Headquarters)

1. Mr. Satoshi Kobayashi

Staff of Japan International Cooperation Agency

ANNEX II: LIST OF THE MEMBER OF STEERING COMMITTEE



REPUBLIKA E SHQIPERISE MINISTRIA E EKONOMISE, TREGTISE DHE ENERGJETIKES DREJTORIA E PERGJITHSHME RREGULLATORE

NrProt.	Tiranë, më/ 2009
	URDHER
	Nr Date / / 2009

PER

NGRITJEN E KOMITETIT DREJTUES PER NDJEKJEN E ZBATIMIT TE STUDIMIT PER "MASTERPLANIN PER NXITJEN E INDUSTRISE MINERARE TE SHQIPERISE"

Ne kuader te marreveshjes midis Ministrise se Ekonomise, Tregtise dhe Energjetikes dhe Agjencise Japoneze te Bashkepunimit Nderkombetar – JICA, per kryerjen e nje studimi per "Masterplanin e nxitjes se industries minerare te Shqiperise",

URDHEROJ:

1. Ngritjen e Komitetit Drejtues te perbere nga:

dhe Administrimit te Ujrave

1.	Kristo Rodi	Kryetar (METE)
2.	Mimoza Simixhiu	Anetar (METE)
3.	Adil Neziraj	Anetar (SHGJSH)
4.	Milo Kuneshka	Anetar (AKBN)
5.	Ministria e Mjedisit, Pyjeve	

per ndjekjen e zbatimit te studimit per "Masterplanin e nxitjes se industries minerare

te Shqiperise" ne bashkepunim me grupin e ekpserteve JICA.

- 2. Komiteti Drejtues do te kete keto detyra kryesore:
 - a. Te organizoje punen per sigurimin e informacionit te nevojshem per realizimin e studimit nga SHGJSH, AKBN dhe institucione te tjera ne vend

Anetar

- b. Te ndjeke zbatimin e studimit ne te gjitha fazat dhe te diskutoje dhe marre vendime per çeshtje te rendesishme qe lidhen me realizimin e tij.
- 3. Kryetari i Komitetit Drejtues therret mbledhjen e Komitetit Drejtues nje here ne dy muaj dhe sa here e shikon te nevojshme, ne pranine e grupit te eksperteve te JICA.

4. Per ndjekjen dhe zbatimin e ketij urdheri ngarkohet Drejtoria e Pergjithshme Rregullatore.

MINISTRI

GENC RULI

ANNEX III: LIST OF THE MEMBER OF WORKING GROUP



REPUBLIKA E SHQIPERISE MINISTRIA E EKONOMISE, TREGTISE DHE ENERGJETIKES

NrProt.	Tiranë, më/ 2009
	URDHER
	Nr Date / / 2009

PER

NGRITJEN E GRUPIT TE PUNES PER KRYERJEN E STUDIMIT PER "MASTERPLANIN PER NXITJEN E INDUSTRISE MINERARE TE SHQIPERISE"

Ne kuader te marreveshjes midis Ministrise se Ekonomise, Tregtise dhe Energjetikes dhe Agjencise Japoneze te Bashkepunimit Nderkombetar – JICA, per kryerjen e nje studimi per "Masterplanin e nxitjes se industries minerare te Shqiperise",

URDHEROJ:

1. Ngritjen e Grupit te Punes te perbere nga:

 Kristo Rodi 	Kryetar (METE)
2. Mimoza Simixhiu	Anetar (METE)
3. Adil Neziraj	Anetar (SHGJSH)
4. Edmond Goskolli	Anetar (AKBN)
5. Ramiz Balla	Anetar (METE)
6. Luljeta Kraja	Anetar (METE)
7. Musli Dardha	Anetar (SHGJSH)
8. Gjovalin Leka	Anetar (SHGJSH)
9. Edlira Plaku	Anetar (SHGJSH)
10. Enkelejda Grazhdani	Anetar (SHGJSH)
11. Albert Avxhi	Anetar (SHGJSH)
12. Haki Disha	Anetar (AKBN)
13. Luan Dibra	Anetar (AKBN)

per kryerjen e studimit per "Masterplanin e nxitjes se industries minerare te Shqiperise" ne bashkepunim me grupin e ekpserteve te JICA.

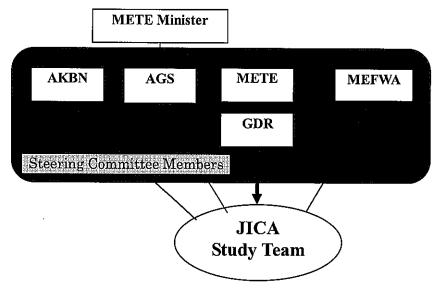
- 2. Studimi do te permbaje keto komponente kryesore:
 - a. Strategjite e zhvillimit minerar per minerale specifike, si kromi, nikeli, bakri etj.

- b. Planin e veprimit mbi nje sere çeshtjesh ne industrine minerare, si kuadri ligjor, ristrukturimi institucional, nxitja e investimeve, mbrojtja e mjedisit, etj.
- c. Dizenjimi i database-it te bazuar ne GIS mbi vendburimet minerale.
- 3. Realizimi i ketij studimi do te perfundoje ne Tetor 2010.
- 4. Per ndjekjen dhe zbatimin e ketij urdheri ngarkohet Drejtoria e Koordinimit dhe Menaxhimit te Kontratave.

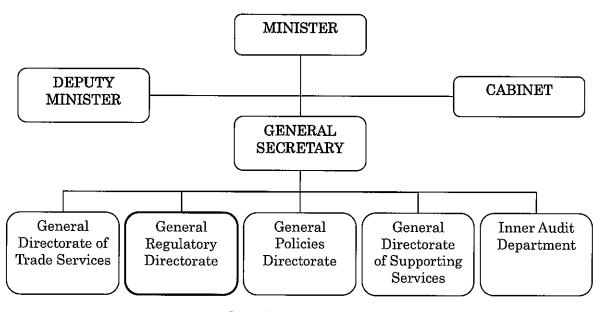
MINISTRI

GENC RULI

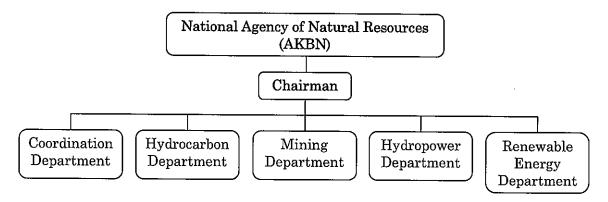
ANNEX IV: ORGANIZATIONAL CHARTS



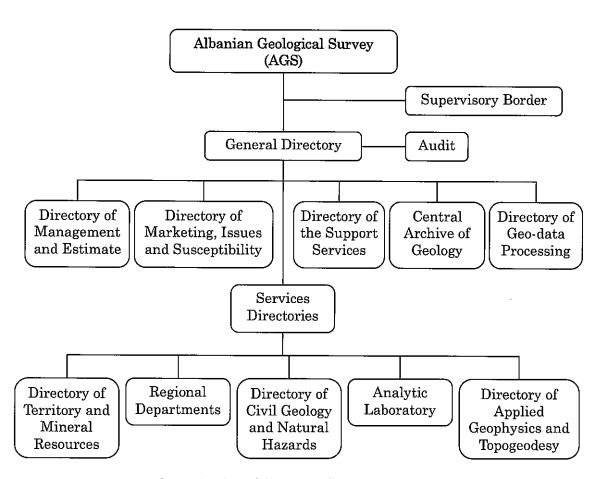
JICA Study Team and Albanian Counterpart



Organization of METE



Organization of AKBN



Organization of Albanian Geological Survey

付属資料 2:第2次現地調査終了時の覚書

MEMORANDUM

ON

THE SECOND SURVEY IN ALBANIA

FOR

THE STUDY FOR

THE MASTER PLAN FOR PROMOTING THE MINIG INDUSTRY OF ALBANIA

In accordance with the Scope of Work for "The Study for the Master Plan for Promoting the Mining Industry of Albania" (hereinafter referred to as "the Study") agreed upon between the Ministry of Economy, Trade and Energy (hereinafter referred to as "METE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on March 5, 2009, and following the MINUTES OF MEETING of June 15, 2009, JICA dispatched the 2nd Study Team (hereinafter referred to as "the Team") headed by Mr. Yoshiaki Shibata and composed of members from Mitsubishi Materials Techno Corporation and Kokusai Kogyo Co., Ltd. to the Republic of Albania.

The Steering committee was planned during the stay of the Study team but due to the situation that new assignments of Ministerial staffs were still in progress, the meeting was not called. To confirm and keep mutual understanding on the progress of the Study, both side jointly prepared this Memorandum and exchanged.

Tirana, October 28, 2009

Mr. Minoru FUJITA For Mr. Yoshiaki SHIBATA Team Leader

Thinom Typto

JICA Study Team

Mr. Dritan HYLLI
General Director of Policies
Ministry of Economy, Trade and Energy

1. Working group meeting and Workshop

1.1 The first Working group meeting, September 29, 2009, (from 9:15 to 11:35)

Agenda: Classification of Mineral Resource

Place: Faculty of Geology and Mining, Polytechnic University of Tirana,

Department of Geoinformatics, Applied & Environmental Geology

1.2 The second Working group meeting, October 8, 2009, (from 10:00-12:00)

Agenda: The expecting GIS database

Place: METE

1.3 The second Workshop (ANNEX 1)

2. Training in Japan (ANNEX 2)

The Team proposed a plan for the training of counterpart in Japan.

The Albanian side agreed to prepare necessary documentation and submit to the JICA coordinator office of Albania by the end of the November 2009.

3. Future plan of the activity

3.1 The third survey in Albania

The third survey in Albania will be implemented as shown the Inception Report, namely from the middle of January 2010.

Albanian side requested intensive OJT on GIS and database during the term of the third survey in Albania because, through a series of discussions held in the second survey, the necessity of capacity development of GIS was recognized by both Albanian counterpart and the survey team.

3.2 International conference in Canada (PDAC)

As an activity of the Study, counterparts will attend and open a booth at the PDAC in Toronto, Canada from 7^{th} to 10^{th} of March 2010 by the support of the Study team.

3.3 Seminar in Japan

Although a seminar in Japan has been planned to be held by the end of 2009 in the Inception Reports, it is most recommendable to hold it around July 2010 so that it may provide much more information.

2nd Workshop on the Study for the Master Plan for Promoting the Mining Industry of Albania









Date: 15 October 2009

Place: AKBN (National Agency of Natural Resources) Meeting Room

Time: 10:00 to 13:50

	Title	Presenter	Time							
1.	Opening Address by AKBN	Mr. Taulant MUSABELLIU	10:00 ~ 10:10							
2.	Opening Address by AGS	Mr. Gjovalin LEKA	10:10 ~ 10:20							
3.	Outline of the Activity to Date	Mr. Yoshiaki SHIBATA	10:20 ~ 10:40							
4.	Activity on Policy for Promotion of Mi	ning Sector								
		Mr. Minoru FUJITA	10:40 ~ 11:10							
5.	[Topics] World Bank Final Report	Prof. Sokol MATI	11:10 ~ 11:30							
6.	6. Activity on Strategy for Development of Specific Minerals									
		Mr. Masatsugu OKAZAKI	11:30 ~ 12:00							
(0	offee Break)		(12:00 ~ 12:20)							
7.	Activity on GIS Based Database	Mr. Zenichi CHIBA	12:20 ~ 12:40							
8.	[Technical Topics] Exploration of Cyp	rus-type Massive Sulphide deposits	in the Sultanate of Oman							
		Mr. Yoshiaki SHIBATA	12:40 ~ 13:10							
9.	[Technical Topics] JICA Environmenta	l Project Related to Mining in Maced	onia							
		Mr. Mikio KAJIMA	13:10 ~ 13:40							
10	. Closing Remarks	Prof. Sokol MATI for Mr. Kristo RODI	13:40 ~ 13:50							

Training Program in Japan (tentative plan)

Number of participants: 5 persons

Title of training:

(1) GIS

(2) Data management on geology and mineral resources

Period of training:

2 weeks in the second half of February, 2010

Place for training:

mainly in Tokyo

Attainment target:

(1) Upgrading of knowledge of GIS technology

(2) Upgrading of knowledge of Data management on geology and

mineral resources

Outline of training:

(1) GIS

- Training at Mitsubishi Materials Techno Corp. and Kokusai Kogyou Co., Ltd.
- Participate the seminar on advanced GIS technology at ESRI Japan Co.,
 Ltd
- Visit GIS section of governmental organizations
 - Japan Oil, Gas and Metals National Corporation (JOGMEC)
 - Geological Survey of Japan (GSJ)
 - Geographical Survey Institute (GSI)
- (2) Data management
 - Visit governmental organizations related to Mining, Geology, Environment, etc.
 - Japan Oil, Gas and Metals National Corporation (JOGMEC)
 - Geological Survey of Japan (GSJ)
 - Geographical Survey Institute (GSI)
 - Tokyo University
 - Earth Remote Sensing Data Analysis Center (ERSDAC)
 - Visit waste water treatment facilities of old mine.
 - Visit copper smelting plant

Proposed idea:

- For (1) GIS, 1 person each from METE and AGS
- For (2) Data management, 1 person each from METE, AKBN and AGS

付属資料 3:第3次現地調査終了時の覚書

MEMORANDUM

ON

THE THIRD SURVEY IN ALBANIA

FOR

THE STUDY FOR

THE MASTER PLAN FOR PROMOTING THE MINIG INDUSTRY OF ALBANIA

In accordance with the Scope of Work for "The Study for the Mater Plan for Promoting the Mining Industry of Albania" (hereinafter referred to as "the Study") agreed upon between the Ministry of Economy, Trade and Energy (hereinafter referred to as "METE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on March 5, 2009, and following the MINUTES OF MEETING of June 15, 2009, JICA dispatched the 3rd Study Team (hereinafter referred to as "the Team") headed by Mr. Yoshiaki Shibata and composed of members from Mitsubishi Materials Techno Corporation and Kokusai Kogyo Co., LTD. to the Republic of Albania.

In stead of calling the Steering committee meeting, due to the limitation of time and without any urgent requirement for the agenda of the meeting, both side jointly prepared this Memorandum and exchanged to confirm and keep mutual understanding on the progress of the Survey.

Tirana, February 18, 2010

Mr. Minoru FUJITA

For Mr. Yoshiaki SHIBATA

Team Leader JICA Study Team Mr. Dritan HYLLI

General Director of Policies

Ministry of Economy, Trade and Energy

1. Training Course, Working group meeting and Workshop

- 1.1 Training Course (ANNEX 1)
- 1.2 Working group meetings (ANNEX 1)
- 1.3 The third Workshop (ANNEX 2)

2. Training in Japan (ANNEX 3-1 and 3-2)

- 2.1 Mr. Edmond GOSKOLLI and Mr. Gjobalin LEKAJ from 12 to 27 February for Schedule 1
- 2.2 Mr. Albert AVXHI and Mr. Ramis BALLA from 12 to 27 February for Schedule 2

3. International conference in Canada (PDAC)

As an activity of the Study, Mr. Dritan HYLLI and Prof. Sokol MATI will attend and open a booth at the PDAC in Toronto, Canada from 7th to 10th of March 2010 by the support of the Study team.

4. Interim Report

A draft of the Interim Report of the Study will be proposed at the earliest convenience upon approval from JICA for mutual consultation so that the preparation work of next report (a draft report) may proceed smoothly.

5. The 4th survey in Albania

The 4th survey in Albania will be implemented as shown the Inception Report, namely from June 2010.

6. Seminar in Japan

(As confirmed in the previous (2nd) survey)

Although a seminar in Japan has been planned to be held by the end of 2009 in the Inception Reports, it is most recommendable to hold it around July 2010 so that it may provide much more information.

ANNEX 1

Action Program for improvement of conditions of mining sector

1st WG Meeting

February 11 (Thursday) 14:00 - 15:00 at AKBN

Agenda

1. Implementation of development on institutional, organizational and legal aspects in the mining sector

GIS and Database

Training Course on GIS

5 days from 20 January (Wednesday) to 26 January (Tuesday) $9 \colon\!\! 00-12 \colon\!\! 00$ AKBN Meeting Hall

2nd WG Meeting

29 January (Friday) 11:00-12:30. at AKBN

Agenda;

- 1. Outline of the Study
- 2. Purpose of the preparation of the GIS database

Action Plan for Environmental Management on the Mining Aspect

1st WG Meeting

19 January (Tuesday) 10:00-12:30 at METE Meeting Room

Agenda;

- 1. Organization of Working Group of the Action Plan for Mine Pollution
- 2. Issues on Environmental and Social Consideration for Sustainable Mining Development

2nd WG Meeting

27 January (Wednesday), 10:00-12:30 at METE Meeting Room

Agenda;

1. Formulating the Action Plan on Mine Pollution

3rd WG Meeting

2 February (Tuesday) 10:00 – 12:30 at METE Meeting Room

Agenda;

- 1. Formulating the Action Plan on Mine Pollution
- 2. REACH

Strategy of Specific Mineral Development

2nd WG Meeting

January 20 (Wednesday) 13:00 - 14:40 at AKBN Hall

Agenda;

- 1. Supply &' demand of copper in the World
- 2. A study case of development of mine

"Survey and development of the Tizapa Mine, Mexico" (DVD)

3rd WG Meeting

January 27 (Wednesday) 13:00 - 14:40 at AKBN Meeting Hall

Agenda;

- 1. Supply &' demand of Chromites in the World
- 2. Present situation in Albania and some opinions for the future of Cr industry in Albania
- 3. A study case mining Industry in Japan (DVD)

4th WG Meeting

February 2 (Tuesday) 13:00-14:40 Meeting Hall of AKBN

Agenda;

- 1. World and Albanian Copper deposits
 - ··· Clarifying the future of Copper industry in Albania (2)
- 2. A study case mining industry in Japan (DVD)

Mineral Processing of Complex Sulfide Ore

5th WG Meeting

February 11 (Thursday) 12:30 - 14:00 of AGS Annex Office

Agenda;

- 1. Puka-Mirdita VMS vs Kurokc
- 2. A study case mining industr

Exploration for the Kuroko Deposit,

)

3rd Workshop on the Study for the Master Plan for Promoting the Mining Industry of Albania









Date: 8 February (Monday), 2010

Time: 09:00 - 14:00

Place: Onufri Room, Tirana International Hotel

	Title	Presenter	Ti	me
			(include 5 min	utes for Q&A)
1.	Opening Address			09:00 ~ 09:10
		Mr. Dritan HYLLI	, General Directo	or, METE
2.	Outline of the Activity to Date			09:10 ~ 09:25
		Mr. Yoshiaki SHIB.	ATA, Leader, JIC	CA Study team
3.	Action Program and Master Plan	of the Study		09:25 ~ 9:50
		Mr. Minoru FUJITA	A, JICA Study Te	eam
4.	New Mining Law and Mining Pol	licy		9:50 ~ 10:15
	7777	Prof. Sokol MATI,	Director, METE	
5.	Strategy for Development of Spec	eific Minerals (1)		10:15 ~ 10:40
		Mr. Masatsugu OK	AZAKI, JICA St	udy Team
6.	AKBN's Mission for Minerals Re	sources Development	t	10:40 ~ 11:00
		Mr. Lame STOJA, l		

(Coffee Break 11:00 ~ 11:20)

7. Strategy for Development of	f Specific Minerals (2)	11:20~ 11:40
	Mr. Ken NAKAYAMA, JICA S	tudy Team
8. AKBN's Mission for Minera	als Resources Development	11:40 ~ 12:10
	Mr. Edmond GOSKOLLI, Dire	ctor, AKBN
9. Short Description of Activity	y of AGS for Mineral Exploration	12:10 ~ 12:30
	Mr. Gjovalin LEKAJ, Director,	AGS
10. Action Program on Enviror	nment	12:30 ~ 12:50
	Mr. Zef LLESHI, Specialist	on Environment,
METE		
11. Action Program for GIS Ba	sed Database	12:50 ~ 13:10
	Mr. Zenichi CHIBA, JICA Stud	y Team
12. Local community and Mini	ng, Albanian case	13:10 ~ 13:30
	Prof. Sokol MATI, Director, MI	ETE
13. Discussions		13:30 ~ 13:50
14. Closing Remarks		13:50 ~ 14:00
	Dr. Adil NEZIRAJ, Director Ge	eneral, AGS
(75. 00		

(Buffet lunch at the lobby, 1st floor)

ANNEX3-1

Schedule for Mr. Edmond GOSKOLLI and Mr. Gjovalin LEKAJ

accommodation					JICA Tokyo	(03)3485-7051		Asago city		Okayama City			JICA Tokyo							p									
venue					Briefing room, JICA Tokyo		Japan Oil, Gas, and Metals National Corporation		Ikuno Old Mine		Mitsubishi Material Naoshima	Smelting Plant					Mitsubishi Material Techno Corp.	Albanian Embassy	Mitsubishi Material Techno Corp.	The National Institute of Advanced	Science & Technology (AIST)	(Geological Survey of Japan)	(Geological Survey of Japan)	National Geographic Institute	Mitmitish: Motorial Tourish	Mitsubisini Material Techno Corp.	JICA Economic Development Dep.		
	Departure (Leaving for Rome), Visit Japanease Embassy	holiday	Departure (Leaving for Japan)	Arrival at Japan	Briefing	Program Orientation	Introduction of JOGMEC, activity etc. Data base system for mineral resources and field data	Move to Ikuno Old Mine site	Site visit of old mine and waste water treatment facility	Move to Naoshima Island	Visit to Mitsubishi Material Naoshima Smelting Plant	Move back to Okayama	Move to Kyoto	Stop in Kyoto	Move back to Tokyo	holiday	Discussion on the MP study	Visit to Albanian Embassy in Tokyo	Discussion on the MP study	Introduction of Geological Survey of Japan	Introduction of mapping activity and data base management		Geological Museum	Introduction of National Geographic Institute	Discussion on data management and GIS for the study	Summary session	Courtesy visit, Discussion on the project	Evaluation meeting	
time				15-Feb 9:40-14:50	16-Feb 9:40-14:50	15:00-16:00	Wed 17-Feb 10:00-12:00 13:00-16:00	18-Feb 9:00-14:00	14:00-17:00	19-Feb 9:00-11:30	13:00-16:30	16:30-18:30	9:00-11:00	11:00-16:00	16:00-18:00		22-Feb 10:00-11:00	11:00-12:00	13:30-16:00	23-Feb 10:00-12:00	13:30-16:00		24-Feb 10:00-12:00	13:30-16:00	25-Feb 10:00-12:00	13:00-16:30	26-Feb 10:30-11:00	11:00-11:30	
date	12-Feb	13-Feb	14-Feb		16-Feb		17-Feb	18-Feb		19-Feb			20-Feb			21-Feb	22-Feb			23-Feb			24-Feb		25-Feb		26-Feb		
٥	Fri	Sat	Sun	Mon	Tue		Wed	Thu		Fri			Sat			Sun	Mon			Lne			Wed		Thu		Fri		

ANNEX3-2

Schedule for Mr. Albert AVXHI and Mr. Ramis BALLA

,	date	time		venue	accommodation
Fri	12-Feb		Departure (Leaving for Rome), Visit Japanease Embassy		
Sat	13-Feb		holiday		
Sun	14-Feb		Departure (Leaving for Japan)		
Mon	15-Feb	15-Feb 9:40-14:50	Arrival at Japan		
Tue	16-Feb	16-Feb 9:40-14:50		Briefing room, JICA Tokyo	JICA Tokyo
Wed	17-Feb	17-Feb 10:00-12:00 13:00-16:00		Japan Oil, Gas, and Metals National Corporation	1001-00+0(00)
Thu	18-Feb	18-Feb 10:00-12:00 13:00-16:00	Remote sensing/ GIS activities by Kokusai Kogyo Co., Ltd. Application of GIS technology	Kokusai Kogyo Co., Ltd.	
Fri	19-Feb	10:00-12:00	10/	Earth Remote Sensing Data Analysis Center	
Sat	20-Feb	13:00-16:00	Application of GIS technology	Mitsubishi Material Techno Corp.	
Sun	21-Feb		holiday		
Mon	22-Feb	22-Feb 10:00-11:00 11:00-12:00 13:30-16:00		Mitsubishi Material Techno Corp. Albanian Embassy Mitsubishi Material Techno Corp.	
Tue	23-Feb	23-Feb 10:00-12:00 13:30-16:00	Introduction of Geological Survey of Japan Introduction of mapping activity and data base management	The National Institute of Advanced Science & Technology (AIST) (Geological Survey of Japan)	
Wed	24-Feb	24-Feb 10:00-12:00 13:30-16:00	Geological Museum Introduction of National Geographic Institute	(Geological Survey of Japan) National Geographic Institute	
Thu	25-Feb	25-Feb 10:00-12:00 13:00-16:30		Mitsubishi Material Techno Corp.	
Fri	26-Feb	26-Feb 10:30-11:00 11:00-11:30	Courtesy visit, Discussion on the project Evaluation meeting	JICA Economic Development Dep.	
Sat	27-Feb		Departure (Leaving for Albania)		

REPUBLIKA E SHQIPERISE MINISTRIA E EKONOMISE, TREGTISE DHE ENERGJETIKES DREJTORIA E PERGJITHSHME E POLITIKAVE DREJTORIAE POLITIKAVE INDUSTRIALE

Nr.	Prot.	Tirane, me	1	/ 2010

URDHER

Nr. fr_ Date/ Z / 2010 PER

NGRITJEN E KOMITETIT DREJTUES PER NDJEKJEN E ZBATIMIT TE STUDIMIT PER "MASTERPLANIN PER NXITJEN E INDUSTRISE MINERARE TE SHQIPERISE"

Ne mbeshtetje te nenit 102, pika 4 te Kushtetutes se Republikes se Shqiperise dhe ne zbatim te marreveshjes midis Ministrise se Ekonomise, Tregtise dhe Energjetikes dhe Agjencise Japoneze te Bashkepunimit Nderkombetar - JICA, per kryerjen e nje studimi per "Masterplanin e nxitjes se industrise' minerare te Shqiperise", me propozim te Drejtorise se Pergjithshme te Politikave,

URDHEROJ:

6. Ngritjen e Komitetit Drejtues te perbere nga:

DritanHylli Kryetar (METE)
 SokolMati Anetar (METE)
 AdilNeziraj Anetar (SHGJSH)
 Taulant Musabelliu Anetar (AKBN)

per ndjekjen e zbatimit te studimit per "Masterplanin e nxitjes se industrise minerare te Shqiperise" ne bashkepunim me grupin e eksperteve te JICA.

- 7. Komiteti Drejtues do te kete keto detyra kryesore:
 - a. Te organizoje punen per sigurimin e informacionit te nevojshem per realizimin e studimit nga SHGJSH, AKBN dhe institucione te tjera ne vend.
 - b. Te ndjeke zbatimin e studimit ne te gjitha fazat dhe te diskutoje dhe marre vendime per ceshtje te rendesishme qe lidhen me realizimin e tij.
- 8. Kryetari i Komitetit Drejtues therret mbledhjen e Komitetit Drejtues nje here ne dy muaj dhe sa here e shikon te nevojshme, ne pranine e grupit te eksperteve te JICA.
- 9. Per ndjekjen dhe zbatimin e ketij urdhri ngarkohet Drejtoria e Pergjithshme e Politikave.
- 10. Urdhri i Ministrit nr.524 date 10.06.2009 shfuqizohet.

STRI/

REPUBLIKA E SHQIPERISE MINISTRIA EKONOMISE, TREGTISE DHE ENERGJETIKES DREJTORIA E

DRITANPRIFR

PERGJITHSHME E POLITIKAVE DREJTORIA E POLITIKAVE INDUSTRIALE

URDHER

Nr. *, Date

PER

NGRITJEN E GRUPIT TE PUNES PER KRYERJEN E STUDIMIT PER "MASTERPLANIN PER NXITJEN E INDUSTRISE MINERARE TE SHQIPERISE"

Ne mbeshtetje te nenit 102, pika 4 te Kushtetutes se Republikes se Shqiperise dhe ne zbatim te marreveshjes midis Ministrise se Ekonomise, Tregtise dhe Energjetikes dhe Agjencise Japoneze te Bashkepunimit Nderkombetar - JICA, per kryerjen e nje studimi per "Masterplanin e nxitjes se industrise minerare te Shqiperise", me propozim te Drejtorise se Pergjithshme te Politikave,

URDHEROJ:

6. Ngritjen e Grupit te Punes te perbere nga:

25 Dritan Hylli	Kryetar (METE)
26 Sokol Mati	Anetar (METE)
27 Zef Lleshi	Anetare (METE)
28 Ramiz Balla	Anetar (METE)
29 Luljeta Kraja	Anetar (METE)
30 Adil Neziraj	Anetar (SHGJSH)
31 Lavdie Moisiu	Anetar (SHGJSH)
32 Musli Dardha	Anetar (SHGJSH)
33 Gjovalin Leka	Anetar (SHGJSH)
34 Edlira Plaku	Anetar (SHGJSH)
35 Enkelejda Grazhdani	Anetar (SHGJSH)
36 Albert Avxhi	Anetar (SHGJSH)
37 Lavdie Moisiu	Anetar (SHGJSH)
38 Taulant Musabelliu	Anetar (AKBN)
39 Edmond Goskolli	Anetar (AKBN)
40 Kleves Janku	Anetar (AKBN)
41 Adhurim Caushi	Anetar (AKBN)

42 Ismail Mema Anetar (AKBN)
.
43 Gole Vasha Anetar (AKBN)

44 Haki Disha Anetar (AKBN)

45. Lame Stoja Anetar (AKBN)
46. Bardhyl Shushku Anetar (AKBN)
47. David Naco Anetar (AKBN)
48. Ardit Islami Anetar (AKBN)

per kryerjen e studimit per "Masterplanin e nxitjes se industrise minerare te Shqiperise" ne bashkepunim me grupin e eksperteve te JICA.

- 7. Studimi do te permbaje keto komponente kryesore:
 - a. Strategjite e zhvillimit minerar per minerale specifike, si kromi, nikeli, bakri etj.
 - b. Planin e veprimit mbi nje sere ceshtjesh ne industrine minerare, si kuadri ligjor, ristrukturimi institucional, nxitja e investimeve, mbrojtja e mjedisit, etj.
 - c. Dizenjimi i database-it te bazuar ne GIS mbi vendburimet minerale.
- 8. Realizimi i ketij studimi do te perfundoje ne Tetor 2010.
- 9. Per ndjekjen dhe zbatimin e ketij urdhri ngarkohet Drejtoria e Pergjithshme e Politikave.

10. Urdhri i Ministrit nr.523 date 10.06.2009 shfuqizohet.

10

付属資料 4:第5次現地調査終了時の覚書

MEMORANDUM

ON

THE FIFTH SURVEY IN ALBANIA

FOR

THE STUDY FOR

THE MASTER PLAN FOR PROMOTING THE MINIG INDUSTRY OF ALBANIA

In accordance with the Scope of Work for "The Study for the Mater Plan for Promoting the Mining Industry of Albania" (hereinafter referred to as "the Study") agreed upon between the Ministry of Economy, Trade and Energy (hereinafter referred to as "METE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on March 5, 2009, and following the MINUTES OF MEETING of June 15, 2009, JICA dispatched the 5th Study Team (hereinafter referred to as "the Team") headed by Mr. Yoshiaki Shibata and composed of members from Mitsubishi Materials Techno Corporation and Kokusai Kogyo Co., LTD. to the Republic of Albania.

In stead of calling the Steering committee meeting, due to the limitation of time and without any urgent requirement for the agenda of the meeting, both side jointly prepared this Memorandum and exchanged to confirm and keep mutual understanding on the progress of the Survey.

Tirana, July 16, 2010

Mr. Minoru FUJITA For Mr. Yoshiaki SHIBATA

Team Leader, JICA Study Team Mr. Dritan HYLLI

General Director,

General Directorate of Natural Resources

Development Policies,

Ministry of Economy, Trade and Energy

1. Interim Report and draft of Draft Final Report

Ten (10) copies of the Interim Report were submitted to Albanian counterpart through METE at the beginning of the 5th Study.

A draft of the Draft Final Report of the Study will be proposed at the earliest convenience upon approval from JICA for mutual consultation so that the preparation work of Final Report may proceed smoothly.

2. Working group meeting and Workshop held in this survey term;

- 1.1 Working group meetings (ANNEX 1)
- 1.2 The 4th Workshop (ANNEX 2)

3. Seminar in Japan

An investment promotion seminar in Japan is planned on 28th (Tuesday) September 2010. METE assigned two officials, namely, Mr. Dritan HYLLI, General Director, General Directorate of Natural Resources Development Policies and Prof. Sokol MATI, Director of Mining Industry to attend the seminar and deliver presentations. Travel procedure is cleared in cooperation with JICA Albanian coordinator office.

4. Training in Japan

METE and JICA Study team shared an opinion that the need of training on GIS-Database which is an essential component for developing mining sector. As the necessity of capacity development of staffs in charge of GIS-Database is quite urgent, METE requested four (4) trainees from AKBIN and AGS.

The survey team is proposing the term for the training from 10th September to 1st October 2010. JICA does not yet finalize any matter relating to the training as budget arrangement is under progress.

5. The 6th survey in Albania

The 6th (and the last) survey in Albania will be implemented as shown in ANNEX 3.

The 5th workshop is proposed to be held on 15 (Friday) October 2010.

(Note: Mr. CHIBA will stay from 23 September to 4 October independently but still as a member of the JICA Study team)

Study for the Master Plan for Promoting the Mining Industry of Albania

Working Group on Institutional, Organisational and Legal Issues

1st Working Group Meeting

Date: 10 June 2010 (14.00 to 15.30) Location: METE

Agenda

- 1. Reminder of the aims and context of the Working Group.
- 2. Introduction to the draft Action Programme on Institutional, Organisational and Legal Issues.
- 3. Initial discussion on priority components of the draft Action Programme.
- 4. Date of next Working Group meeting (which will aim to receive more detailed comments and feedback from the Working Group members).
- 5. Planning of the Workshop (21 June 2010).
- 6. Any other business

Handouts

- 1. Introduction presentation, 2. Document on Aims of Working Group (distributed before meeting), 3. Chapter 8 Draft Action Programme (distributed before meeting)
- 4. Chapter 3 Background on key issues, 5. Draft agenda for Workshop (21 June 2010)

2nd Working Group Meeting

Date: 16 June 2010 (14.00 to 15.30) Location: METE

Agenda

- 1. Reminder of discussion points from first Working Group meeting.
- 2. List of key issues to be discussed at this meeting, including:
 - mechanism for strategy implementation (e.g. possible use of a Task Force).
 - amendment to the title and content of the component on "privatisation".
 - more discussion on roles and responsibilities.
 - potential legislation on defining roles for monitoring and enforcement.
 - requirements for guidelines. etc
- 3. Further discussion on key issues of the draft Action Programme.
- 4. Initial discussion on draft table of year 1 actions.
- 5. Further planning of the Workshop (21 June 2010).
- 6. Date of next Working Group meeting (if needed).
- 7. Any other business

Handouts

Notes of first meeting of Working Group., Draft table of year 1 actions, Options analysis for implementation, Final draft agenda for Workshop.

3rd Working Group Meeting

Date: 24 June 2010 (10.00 to 11.30) Location: METE Meeting Room

Agenda

Review of Strategy/Master Plan so far established

Others

Handouts

Review sheets (5 Objectives set out in the "Business and Investment Development Strategy (2007 – 2013)": BIDS)

Study for the Master Plan for Promoting the Mining Industry of Albania

The 4th Workshop – Presentation of the Draft Master Plan

Aim of the Workshop: to present and discuss the first draft Master Plan for the Mining Sector

Date and time: June 21, 2010 (Monday) 9:10 – 13:00

Place: AKBN Conference Room

Agenda:

_	
(cancelled) 9.10 – 9.20	Introduction – Senior representative of METE Aims of workshop and Overview of Project Progress – Mr Y SHIBATA
(cancelled)	Update on institutional and legal framework related to mining
	- Professor Sokol MATI (update on new Mining Law, update on
	restructuring in METE, etc)
9.20 - 9.35	Presentation on draft Action Programme for Institutional, Organisational
	and Legal Framework – Mr M WENBORN
9.35 – 10.10	Discussion (on Institutional and Legal actions)
10.10 – 10.25	Presentation on Action Programme for Mining Activities
	– Mr M OKAZAKI
10.25 - 10.50	Discussion (on Mining Activities actions)
10.50 – 11.10	Coffee Break
11.10 – 11.25	Presentation on Action Programme for GIS – Mr Z CHIBA
11.25 – 11.55	Discussion (on GIS actions)
(cancelled)	Presentation on Key Environmental Issues – MoEFWA
11.55 – 12.10	(Additional) Presentation on Master Plan – Mr M.FUJITA
12.10 – 12.25	Discussion (on Master Plan)
12.25 – 13.00	Discussion (general discussion on Master Plan) and
	Summary of discussions – Mr Y SHIBATA
(cancelled)	Closing remarks- Senior representative of METE

The 6th survey in Albania

2010			Members of the Study Team												
	201	10	Y. Shibata	M. Fu	jita	M. Okazaki	M. Wenborn	Ms. A.Ozawa		. Chiba	K. Nakayama	H. Hyodo	M. Kajima	N. Nemoto	Meeting
September	19	Sun			_										
	20	Mon													
	21	Tue													
	22	Wed							Aı	r. Tirana					
	23	Thu													
	24	Fri													
	25	Sat													
	26	Sun													
	27	Mon													
	28	Tue													
	29	Wed													
	30	Thu													
	1	Fri													
	2	Sat													
	3	Sun													
	4	Mon							l						
	5	Tue							L۷	. Tirana					
	6	Wed													
	7	Thu		Ar. Tira	ana	Ar. Tirana	Ar. Tirana	Ar. Tirana							
	8	Fri	Ar. Tirana												
	9	Sat													
	10	Sun													
ē	11	Mon													
October	12	Tue													
Sct	13	Wed													
	14	Thu		Щ											
	15	Fri												5	th Workshop
	16	Sat													
	17	Sun													
	18	Mon	-												
	19	Tue	Lv. Tirana			<u> </u>	<u> </u>								
	20	Wed		Lv. Tira			Lv. Tirana	Lv. Tirana							
	21	Thu		Ar. Jap	oan	Ar. Japan		Ar. Japan							
	22	Fri													
	23	Sat													
	24	Sun													
	25	Mon													
	26	Tue													
	27	Wed													
	28	Thu													
	29	Fri													
	30	Sat													
	31	Sun													

付属資料 5:第6次現地調査終了時の覚書

MEMORANDUM

ON

THE SIXTH SURVEY IN ALBANIA

FOR

THE STUDY FOR

THE MASTER PLAN FOR PROMOTING THE MINIG INDUSTRY OF ALBANIA

In accordance with the Scope of Work for "The Study for the Mater Plan for Promoting the Mining Industry of Albania" (hereinafter referred to as "the Study") agreed upon between the Ministry of Economy, Trade and Energy (hereinafter referred to as "METE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on March 5, 2009, and following the MINUTES OF MEETING of June 15, 2009, JICA dispatched the 6th Study Team (hereinafter referred to as "the Team") headed by Mr. Yoshiaki SHIBATA and composed of members from Mitsubishi Materials Techno Corporation and Kokusai Kogyo Co., LTD. to the Republic of Albania.

In stead of calling the Steering committee meeting, due to the limitation of time and without any urgent requirement for the agenda of the meeting, both side jointly prepared this Memorandum and exchanged to confirm and keep mutual understanding on the progress of the Survey.

Tirana, October, 2010

军田方彩

Mr. Yoshiaki SHIBATA Team Leader, JICA Study Team Mr. Pjeter DEMA

General Director,

General Directorate of Natural Resources

Development Policies,

Ministry of Economy, Trade and Energy

1. Draft Final Report and preparation of Final Report

Ten (10) copies of the Draft Final Report and its Summary were submitted to Albanian counterpart through METE at the beginning of the 6th Study.

A draft of the Final Report of the Study will be proposed at the earliest convenience upon approval from JICA for mutual consultation so that the Final Report may be completed by the end of November 2010.

- 2. Working group meetings, Workshop and Discussion with JICA country office held in this survey term;
 - 2.1 Working group meetings (ANNEX 1)
 - 2.2 Discussion with JICA country office (ANNEX 1)
 - 2.3 The 5th Workshop (ANNEX 2)

Seminar in Japan

An investment promotion seminar in Japan was held is planned on 28th (Tuesday) September 2010. METE assigned two officials and the team invited those two and travel procedure was cleared in cooperation with JICA Albanian coordinator office.

The ambassador of Albania to Japan and Prof. Sokol MATI, Director of Mining Industry, General Directorate of Natural Resources Development Policies delivered presentations at the Seminar.

4. Training in Japan

METE and JICA Study team shared an opinion that the need of training on GIS-Database which is an essential component for developing mining sector. As the necessity of capacity development of staffs in charge of GIS-Database is quite urgent, METE requested four (4) trainees from AKBIN and AGS.

The survey team had been proposing the term for the training from 10th September to 1st October 2010. JICA could not allocate necessary budget for this training due to the limitation of total budget.

5. The 6th survey in Albania

The 6th (and the last) survey in Albania was implemented as shown in ANNEX 3.

Mr. CHIBA stayed from 23 September to 4 October independently but as a member of the 6th JICA Study Team.

ANNEX 1

Study for the Master Plan for Promoting the Mining Industry of Albania

Working group meetings, Workshop and Discussion with JICA country office

1st Working Group Meeting

Date: 13 October 2010 (12:00 to 14.30) Location: METE

Agenda

- 1. Agenda of the 5th Workshop
- 2. Exchange opinion on the Draft Final Report
- 3. Date of next Working Group meeting (which will aim to receive more detailed comments and feedback from the 5th Working Shop).

Handouts

Copy of the Draft Final Report and its summary edition1

2nd Working Group Meeting

Date: 18 October 2010 (12:00 to 14.30) Location: METE

Agenda

- 1. Exchange opinion on the result of the 5th Workshop
- 2. Brief summary of the achievement of the study of the Mater Plan
- 3. Draft of the Final Report

Handouts

Draft of the Brief summary

Discussion with JICA country office

Date: 15 October 2010 (14:00 to 15.00) Location: METE

- Albanian counterpart expressed appreciation for the support of JICA and for the dedication of the Study team for the successful achievement of the Survey.
- Albanian side also expressed that the outcome of the Study is surely to be integrated into the mining policy and strategy which is under progress by METE and the government of Albania.
- Technical Coordinator in Albania, Project Formulation Advisor (from JICA Macedonia) and Albanian counterpart exchanged opinion on the further cooperation which strongly enhances the results of the Study.

Study for the Master Plan for Promoting the Mining Industry of Albania 5th Workshop - Presentation of the Master Plan









Aim of the Workshop: Presentation and discussion to finalize the Study for the Master Plan for Promoting the Mining Industry in Albania

Date and time: October 15, 2010 (Friday) 10:00-14:00

Place: METE Conference Room

Agenda:

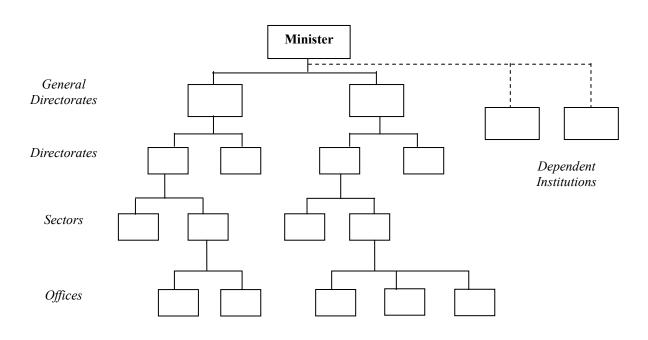
10:00-10:10	Opening remarks - Representative of Albania - METE - Mr. Neritan ALIBALI, Deputy Minister
10:10-10:20	Opening remarks - Representative of Japan - JICA - Ms. Kanako TERUI, JICA Macedonia Office
10:20-10:30	The overview of the study and the aims of the workshop - JICA - Mr. Yoshiaki SHIBATA
10:30-11:00	The implementation of the mining policy and the Master Plan - METE - Prof. Sokol MATI
11:00-11:30	Perspective of future development of specific mineral resources – AKBN - Mr. Edmond GOSKOLLI
11:30-12:00	The contribution of AGS to the mineral resources development - AGS - Mr. Gjovalin LEKA
12:00-12:20	Coffee Break
12:20-12:50	Environmental mitigation measure and rehabilitation for sustainable mining development – METE - Mr. Zef LLESHI
12:50-13:20	GIS-database to enhance natural resources management – AGS - Mr. Albert AVXHIU, METE - Mr. Ramiz BALLA
13:20-13:50	Discussion
13:50-14:00	Closing remarks - Representative of METE - Prof. Sokol MATI

ANNEX 3

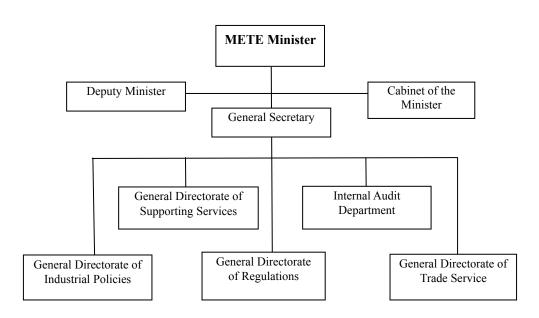
The 6th survey in Albania

	201	0	Members of the Study Team										
	201	10	Y. Shibata	M. Fujita	M. Okazaki	M. Wenbom	Ms. A.Ozawa	Z. Chiba	K. Nakayama	H. Hyodo	M. Kajma	N. Nemeto	Meeting
September	19	Sun											
	20	Mon											
	21	Tue											
	22	Wed		1				Ar. Tirana	-				
	23	Thu											
	24	Fri											
	25	Sat											
	26	Sun											
	27	Mon											
	28	Tue											
	29	Wed											
	30	Thu					1						
	1	Fri									-	-	
	2	Sat											
	3	Sun											
	4	Mon						-3					
	5	Tue						Lv. Tirana					
	6	Wed											
	7	Thu		Ar. Tirana	Ar. Tirana	Ar. Tirana	Ar. Tirana						
	8	Fri.	Ar. Tirana										
	9	Sat											
October	10	Sun			4								
	11	Mon				1 2							
	12	Tue											
	13	Wed											
	14	Thu				34							
	15	Fri	9	3	3							5	th Worksho
	16	Sat											-
	17	Sun											
	18	Mon	1										
	19	Tue	Lv. Tirana										
	20	Wed		Lv. Tirana	Lv. Tirana	Lv. Tirana	Lv. Tirana						
	21	Thu	-	Ar. Japan	Ar. Japan		Ar. Japan						
	22	Fri											
	23	Sat											
	24	Sun											
	25	Mon											
	26	Tue											
	27	Wed											
	28	Thu											
	29	Fri											
	30	Sat											
13	31	Sun	1 2 2					1					

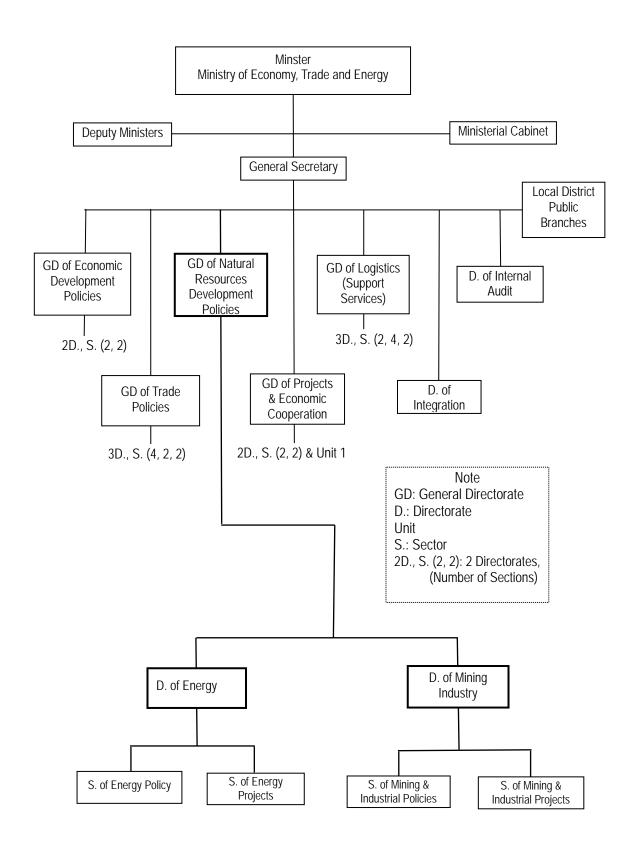
付属資料 6:アルバニア国参加機関の組織図



組織図1 アルバニア省庁の組織の典型例

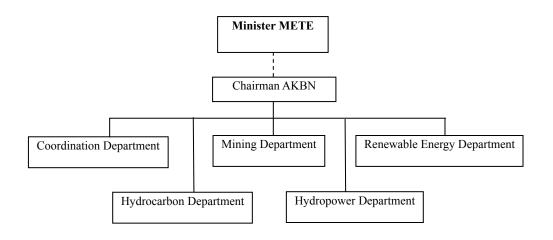


組織図2A 経済・通商・エネルギー省 METE (旧組織) Source: METE web site: http://www.mete.gov.al/news.php?idm=496&l=e



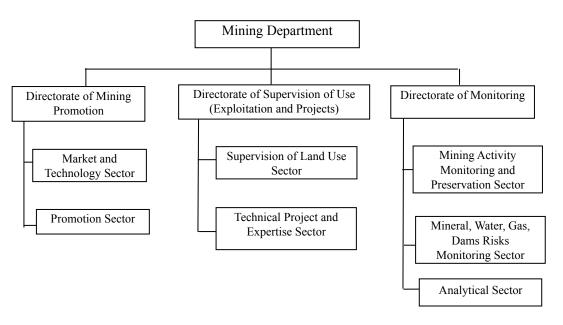
組織図 2 B 経済・通商・エネルギー省 METE (2010 年 7 月~) (Reorganized in July 2010)

天然資源庁 AKBN



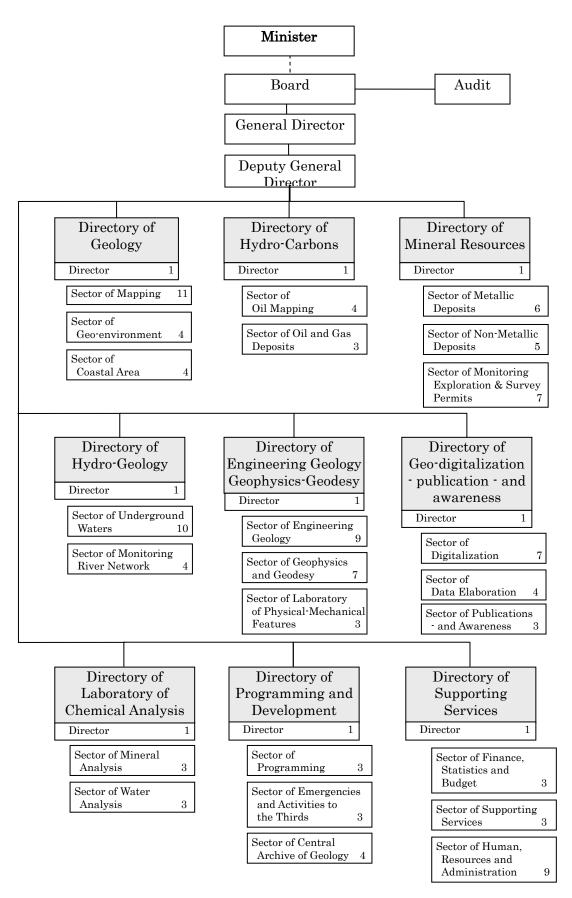
組織図3 天然資源庁(AKBN)

AKBN Mining Department



組織図3-1 AKBN 鉱山部

出典: AKBN web site http://www.akbn.gov.al/eng/



組織図4 地質調査所(AGS) (2009)

枠内末尾の数字は、職員数を示す。 出典: AGS

付属資料 7: PDAC 総会(国際セミナー) 発表

PDAC2010 参加報告

行事名: PDAC 2010, International Convention, Trade Show and Investors Exchange

開催場所: Metro Toronto Convention Centre、トロント、カナダ

開催時期:2010年3月7日(日)より3月10日(水)

参加者: Sokol MATI (Director、METE)

Gjergji KOSTA (legal adviser of the Minister, METE) Kleves JANKU (Head of Project Management, AKBN, METE)

藤田 實 (三菱マテリアルテクノ (株)) 岡﨑正次 (三菱マテリアルテクノ (株))

PDAC (Prospectors and Developers Association of Canada)博覧会は、毎年3月第1日曜日を初日として、カナダのトロントで開催される。これは世界で一番規模の大きい鉱業関係の国際博覧会で、鉱業関連会社や鉱業国によるブースの展示、投資機会の情報交換、および鉱業関連のセミナー、講演会、ワークショップなどが催される。ブース展示の会場には、資源探査に関係する政府機関、コンサルタント会社、調査機器会社、分析会社等が出展する Trade show と、鉱山会社や探査会社が活動を紹介する Investors show の 2 会場が用意されている

本プロジェクトでは、海外からの投資促進を図るため Trade show にブースを設置し、アルバニアの投資環境、鉱物資源ポテンシャルのキャンペーンを行った。

参加人員はアルバニア側カウンターパート 2 名及び調査団から 2 名の 4 名を予定していたが、急遽、METE (経済貿易エネルギー省) が自費で 1 名を派遣する事を決定し、AKBN (天然資源庁) の Mr. Kleves JANKU 加わり総勢 5 名となった。

第3次現地調査 (2010年1月12日より2月20日) の間にカウンターパートとともに展示するポスターや配布資料を検討・作成し、A0版ポスター5枚及び8種類の配布資料を持ち込んだ。これらに加えて、鉱石試料と装飾用岩石の典型的な試料を展示した。

博覧会の参加者は、昨年度と同程度の 2 万人を上回っていたと言われている。アルバニア国のブースには、アルバニアの位置を正確に捕らえていない人から、カナダやアメリカの探査会社及び投資家まで多くの来訪があった。なかでも、アルバニアですでに探査活動を実施しているカナダやオーストラリアの探査会社の社長の訪問もあり、意見交換する事もできた。準備した 100 部の配布資料は無くなり、連絡先として準備した Sokol MATI 氏の名刺を多くの人が持ち帰った事から、多くの人にアルバニアに関して興味を持ってもらえたものと考えられる。さらに、これに加え、カウンターパートが他国の状況を把握できたこと、多くの他国関係者と意見交換ができたことは、大きな成果であったと考えられる。

アルバニアで活動を行っている会社では Tirex 社(銅鉱床探査)及び European Nickel 社(ニッケル鉱山開発のフィジビリティスタディ)がブースを展示していた。



Trade Show ロビーの状況



アルバニアのブース、訪問者への説明



The study for the master plan for promoting the mining industry of Albania

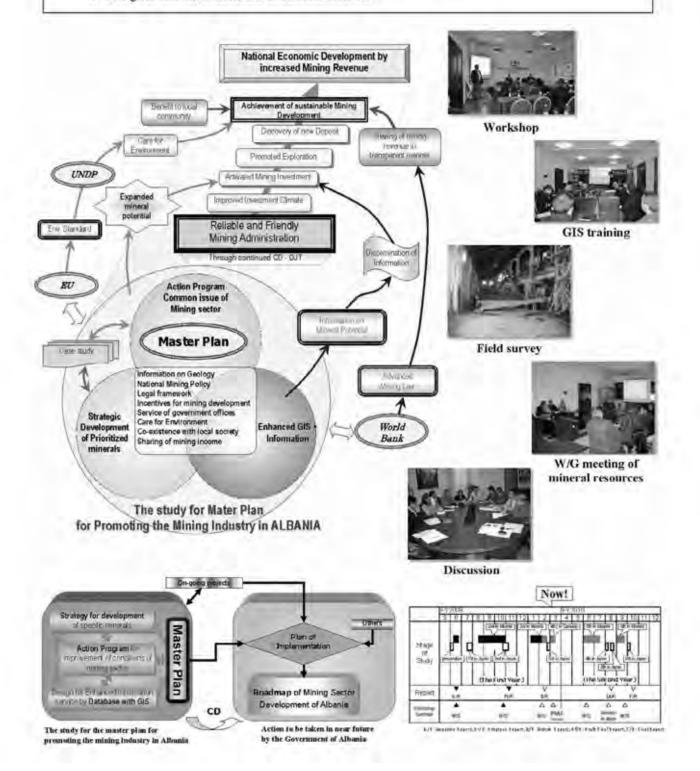


Dijectives of the study

The main objective of the Study is to clarify a roadmap to realize sustainable development of mining industry under privatization and market-oriented economic reform.

The main output of the Study is a project Final Report of the Project. The report contains Master Plan for sustainable development of mining sector that is composed of following items;

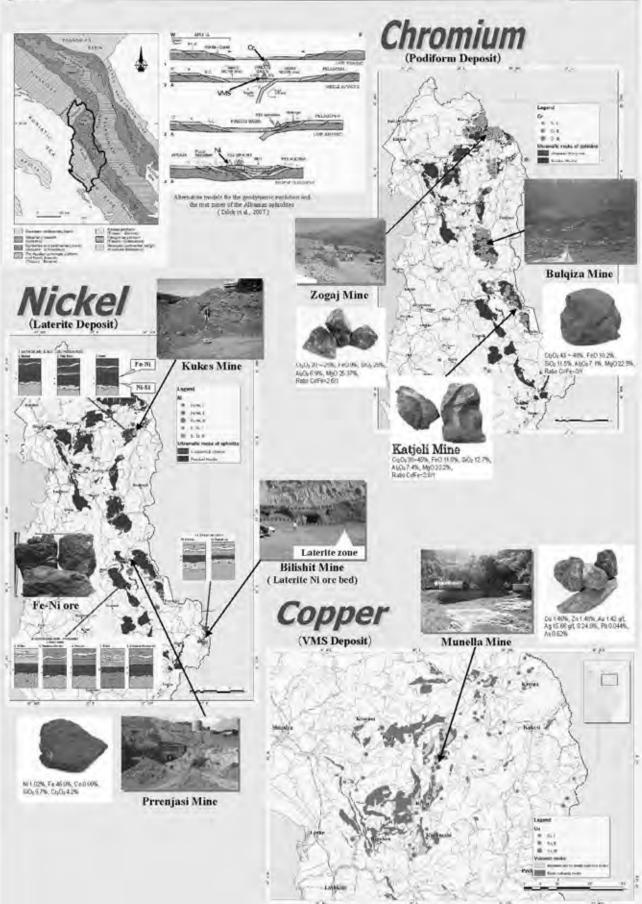
- √ Mineral specific development strategies such as chromium, nickel, copper and others,
- Action plan on selected common issues in the mining industry such as legal framework, organization set-up, investment promotion, environmental protection and so on,
- √ Design of GIS based database on mineral resources





Mineral Resources in Albania







Legislation and Policy of Mining ın Albama



egislation

Mining Law of Albania is approved on 1994. The new draft mining law is waiting for approval from government. The only tax which is special for mining activity is royalty 4 ~ 10% of the sales and depend on the kind of mineral. There are approved seven regulation for:

- Form of the prospecting permit of minerals
- Form of the exploration permit of minerals
- Form of the exploitation license of minerals
- Royalty
- > Reports and Information
- Safety in mining activity
- Instruction and sub lows acts for Environment Protection in the mining areas of Albania

Strategy "Minerals and energy for a sustainable development"



General Objective

> Positioned of the state as inalienable proprietor of mineral wealth

Preparation of development and integration policy of mining activity in the overall country economy

> Re-evaluation of mineral potential and its promotion, in order to put into operation with economic efficiency of traditional minerals and new ones

Challenges to be faced the administrative and technical institutions

Strategies and programmed measures of the state for sustainable, long-term developments and presence of the success of policies of employment

EXPLORATION













EXPLOITATION













Dressing plant Bulgiza

Nickel: Australian-Bitincka Nickel

Copper: Beralb-Copper Bitumen: Bitumi Selenica, French company,



Old slag dump for recycle as crude ore for the high carbon ferrochrome



Landfill of Rubak under cards project

付属資料 8: 本邦セミナー開催

アルバニア国鉱業投資セミナー

Investment Promotion Seminar for Mining Industry in Albania

日時: 2010年9月28日(火)14:00~17:30

場所: (独) 石油天然ガス・金属鉱物資源機構(JOGMEC) 東京カンファレンスルーム

主催: (独) 国際協力機構 (JICA) 後援: 在日アルバニア共和国大使館

Date : 28th September, 2010

Location: Tokyo Conference Room, Japan Oil, Gas and Metals National Corporation (JOGMEC)

Sponsored by: Japan International Cooperation Agency (JICA)

Supported by: Embassy of the Republic of Albania

プログラム/Program

14:00 - 14:10 開会挨拶

ブヤール・ディダ閣下 (駐日アルバニア共和国大使)

Opening Remarks

H.E. Dr. Bujar DIDA, Ambassador of the Republic of Albania to Japan

14:10 - 14:20 鉱業分野における JICA の取組みと本セミナーの狙い

桑島京子(国際協力機構(JICA)産業開発部 部長)

JICA's Commitment in the Mining Sector and the Purpose of this Seminar

Ms. Kyoko KUWAJIMA, Director General, Industrial Development Department, JICA

14:20-15:00 アルバニア国の鉱業と新鉱業法

ソコル・マティ (アルバニア国経済・貿易・エネルギー省鉱業部 部長)

Mining Industry in Albania and New Mining Law

Prof. Sokol MATI, Director, Ministry of Economy, Trade and Energy, the Republic of Albania

15:00-15:20 アルバニア共和国の紹介

ルリンド・ブシャティ (駐日アルバニア共和国大使館 一等書記官)

Introduction of Albania

Mr. Lulind BUSHATI, First Secretary, Embassy of the Republic of Albania to Japan

- 15:20 15:40 コーヒー・ブレイク/Coffee Break
- 15:40-16:10 アルバニア国の投資環境

ソコル・マティ (アルバニア国経済・貿易・エネルギー省鉱業部 部長)

Investment Climate in Albania

Prof. Sokol MATI, Director, Ministry of Economy, Trade and Energy, the Republic of Albania

16:10-16:40 アルバニア国のクロム資源と鉱業

岡崎 正次 (JICA 開発調査チーム)

Cr Resources and Mining in Albania

Mr. Masatsugu OKAZAKI, JICA Study Team

16:40-17:10 アルバニア国のニッケルおよび銅資源と鉱業

中山 健 (JICA 開発調査チーム)

Ni and Cu Resources and Mining in Albania

Mr. Ken NAKAYAMA, JICA Study Team

- 17:10 17:25 質疑応答/Questions & Answers
- 17:25 17:30 閉会挨拶/Closing Remarks



ブヤール・ディダ閣下による開会挨拶



桑島京子産業開発部長による挨拶



ソコル・マティ METE 部長の講演



セミナー参加者



中山団員による講演



岡崎団員による講演

付属資料 9:参考文献および参考情報

参考文献、法令および関係機関のウェブサイト

文献、報告書:

Sustainable Development and Systems for Management of Mining Sector in Albania, Mineral Resource Base of the Southern Caucasus and Systems for its Management in the XXI Century, NATO Science Series, 2003

Strategy for the Development of the Mining Industry based on the Regional Policies designed for the effective management of the current mineral resources and those to be discovered over a 15-year period. METE (November 2005).

Business and Investment Development Strategy 2007 to 2013 – METE (February 2007). Available at web site: http://www.mete.gov.al/doc/20071218084802 business and investment development strategy.pdf

National Strategy for Development and Integration 2007 to 2013 – Government of Albania Council of Ministers (March 2008). Available at web site: http://mie.gov.al/skedaret/1226905647-NSDI.pdf

Albania – Mining Sector Reform, Restructuring and Future Prospects (June 2009) – World Bank. Available at: http://www-

 $\underline{wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/07/21/000333037_20090721002237/Rendered/PDF/475390ESW0P1101C0Disclosed071171091.pdf}$

Challenges to Sustainable Mining Sector Development – Presentation by World Bank (Oil, Gas and Mining Policy Unit - Michael Stanley, Adriana Eftmie, Ander Ufer) (September 2008).

Albania Mining Today – Factsheet - Albania Business and Investment Agency – Albinvest. Available at web site: http://www.albinvest.gov.al/foto/BP Mining.pdf

Mining Legislation in Albania – Factsheet - Albania Business and Investment Agency – Albinvest. Available at web site: http://www.albinvest.gov.al/foto/MINING%20Legislation.pdf

Programme of the Government of Albania - 2005 to 2009. Available at the web site: http://km.gov.al/?fq=preprog/programien# Toc114360428

Documents and procedures for obtaining an exploitation Mining permit according to the law no.7796, date 17.02.1994, modified by law No. 9261, date 22.7.2004 and the law no.9667, date 29.12.2006. http://www.akbn.gov.al/files/mining_procedures.pdf

Updated National Environmental Action Plan (2001) – Albania, Ministry of Environment, Forestry and Water Administration

Capacity Development Handbook for JICA Staff, March 2004 http://www.jica.go.jp/english/publications/reports/study/capacity/200403/pdf/200403.pdf

Article from Albanian Times Newspaper (June 2009) on National Licensing Centre.

Objectives of METE for 2009. http://www.mete.gov.al/doc/20090303080408 objektivat 2009.pdf

Preparation of Natural Resources Development Project (NRDP) ERM 2005.

Regional Development Cross-Cutting Strategy (METE) 2007.

Action Plan for the Regional Development Cross-Cutting Strategy (METE) 2007.

http://www.dsdc.gov.al/dsdc/pub/action_plan_rdcs_031007_169_1.pdf

法令:

Mining Law of Albania (1994) (No. 7796). Available at web site: http://www.akbn.gov.al/files/mining law.pdf

Draft Mining Law of Albania (draft version January 2009)

Law on some Supplements and Amendments of the Mining Law of Albania (2004) (No. 9261) http://www.akbn.gov.al/files/law 9261.pdf

Law on Entrepreneurs and Companies (2008) (No. 9901)

http://www.mete.gov.al/doc/20080716095903 ligji per tregtaret dhe shoqerite tregtare eng.pdf

Law on Foreign Investment (1993) (No. 7764)

 $\underline{http://www1.law.nyu.edu/eecr/bycountryrefs/albaniaForeignInvest.html}$

Law on Concessions (2006) (No. 9663) http://www.akbn.gov.al/files/concessions law 9663.pdf

Decision of Council of Ministers Number 27 - The adoption of the rules for the evaluation and granting of concessions (2007) http://www.mete.gov.al/doc/20070213212937_decision_no.27, dated_19.janar.2007-pdf.pdf

Law on Business Registration Reform (National Registration Centre) (2007) (No. 9723) http://www.mete.gov.al/doc/20070702105148 nrc law parliament text alb eng 3 may 2007.pdf

Environmental Protection Law (2002) (No.8934) http://www.sazp.sk/bcrc/presentation/16-workshop/Participants/Albania/Albania/20presentation.pdf

World Law Guide - List of Albanian Legislation: http://www.lexadin.nl/wlg/legis/nofr/eur/lxwealb.htm

The Concession Law (Number. 9663, dated 18.12.2006)

組織に関するウェブサイト:

Government of Albania web site: http://www.keshilliministrave.al/?gj=gj2

METE web site: http://www.mete.gov.al/news.php?idm=496&l=e

Central Technical Inspectorate: http://www.iqt.gov.al/?l=a

Ministry of Labour, Social Affairs and Equal Opportunities: http://www.mpcs.gov.al/home

MEFWA web site: http://www.moe.gov.al/

MoF web site: http://www.minfin.gov.al/index.php?lang=en

AKBN web site (National Agency of Natural Resources) http://www.akbn.gov.al/eng/

AGS web site http://www.gsa.gov.al/anglisht.htm

AlbInvest web site: http://www.albinvest.gov.al/dokumenti.asp?id=340&kujam=90&menu=101

Institute of Statistics: http://www.instat.gov.al/

National Business Registration Centre: http://www.qkr.gov.al/nrc/default.aspx

Union of Chambers of Commerce and Industry of Albania http://www.abcinfos.com/uccial/index.html

Extractive Industries Transparency Initiative http://www.eitransparency.org/

第4章 参考文献および関係機関のウェブサイト

4.1章

Alliu, I., 2009, A preliminary opinion on the conversion of the ore reserves of Kalimashi and Vllahna chromite deposits (Albania) into UN classification, unpublished paper.

ITNPM, 1999, Study on adaptation of the Albanian classification system to the international classification system of mine resources (in Albanian)

ITNPM and AGS (2005): Strategy for the development of the mining Industry based on the regional policies designed for the effective management of the current mineral resources and those to be discovered over a 15-year long period, Ministry of Economy, trade and Energy, Republic of Albania.

USBM and USGS (1980): Principals of a resources/reserves classification for mineral resources classification for minerals, USGS Circ. 831, 5p

UNECE, 1997, United Nations international framework classification for reserves

/resources - solid fuels and mineral commodities, ENERGY/WP.1/R.70, UNECE

Committee on Sustainable Energy, seventh session, November 1997, 21 p

UNECE, 2000 Report on the task force on practical implementation of the United Nations framework classification for reserves/resources

UNECE, 2004, United Nations framework classification for fossil energy and mineral resources (UNFC 2004), 23 p

Abbreviation

JORC : The Joint Ore Reserves Committee of the Australasian Institute of Mining and

Metallurgy, Australian Institute of Geoscience and Mineral Council of Australia

USBM : United State Bureau of Mines USGS : United State Geological Survey

UNECE : United Nations Economic Commission for Europe

UNFC : United Nation Framework Classification for Resources/Reserves

4.2章

荒井章司 (2003), オフィオライトの鉱床:鉱床学と岩石学、In 資源環境地質学, p9-16, 資源地質学会編

(Arai S. (2003), Ore deposit of ophiolite: Economic Geology and Petrology, In Resource-Environmental Geology, p9-16, Resource Geology of Japan.), in Japanese.

Arai, S, 1997, Control of wall-rock composition on the formation of podiform chromitites as a results of magma/peridotite interaction, Resources Geology, 47, 177-187.

Bakallbashi J., 2009, Governance partnership facility-funded study on small scale mining (SSM) in Albania, Improving tranceparency, accountability and development impact, Chromite ores mining in the zone Batra-Bulqiza, METE 内部報告書

Beqiraj, A., Masi, U., Violo, M, 2000, Geochemical characterization of podiform chromite ores from the ultramafic Massif of Bulqiza (Eastern ophiolite belt, Albania) and hints for exploration, Explor. Mining geol., Vol.9, p149-156

Boshnjaku, B. and Kulici, H., 202, Main metallurgenical features of the Bregu I Bibes Deposit, Tropoja ultramafic massif, Albania, Abstract of the 9th Insternational Platinum Symposium, Billings, Montana, USA, Published by the Duke University.

Empire Mining and EC Terra、2009:、Technical summary report, Bulqiza Project, Albania, Empire Mining

Gervilla, F. and Lablanc, M. 1990, Magmatic ores in high-temperature alpine-type lherzolite massif (Ronda, Spain and BeniBousera, Morocco). Economic Geology, 85, 112-132.

Hoxha, L., 2007, Structural control of Bulqiza chromite deposits, a case histry, Journal of Alpine Geology, Mitt. Ges. Geol. Bergbaustud. Osterr., 48, 52-58.

ITNPM and AGS (2005): Strategy for the development of the mining Industry based on the regional policies designed for the effective management of the current mineral reources and those to be discovered over a 15-year long period, Ministry of Economy, trade and Energy, Republic of Albania.

JICA, 2002. チ リ 国リーチング工場環境配慮型操業改善計画調査 最終報告書

Meco, S., and Shyqyri A., 2000, Geology of Albanai, Gebruder Borntraeger, Berlin

Mathison Geoscience Pty Ltd (2010), Technical report on Albania exploration projects held by Jab Resources Limited

Abbreviation

ITNPM Mining and Processing Technology Institute (presently AKBN) PGE Platinum Group Elements

4.3. 4.4章

Bortolotti, V., Marroni, M., Pandolfi, L. and Principi, G. (2005) Mesozoic to Tertiary tectonic history of the Mirdita ophiolites, northern Albania. The Island Arc, v. 14, p. 471-493.

Cox, D.P. and Singer, D.A. (1992) Mineral deposit models. U.S. Geological Survey Bulletin 1693, pp.273.

Galley, A.G., Hannington, M.D. and Jonasson, I.R. (2007) Volcanogenic massive sulphide deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Type, District Metallogeny, the Evolution of Geological Province, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No.5, p. 141-161.

Hoxha, L., Scott, P.W. and Eyre, J.M. (2005) The geological setting of volcanogenic sulphide ore bodies in Albanian ophiolite. Allied Earth Science, v.114, p. 34-52.

上木隆司. (2009) デマンドサイド分析-ニッケル-. 金属資源レポート. p.167-215.

Kubota, H., Urabe, T., Yamada, R. and Tanimura, S. (2004) Exploration indices and mineral potential map of the Kuroko deposits in NORTHEAST Japan. Resource Geology, v.54, p. 387-397.

World Metal Statistics 2009

http://www.tirexresources.com/

http://www.volcanicmetals.com/

http://www.jabresources.com/

http://www.balkanresources.com/

http://www.enickel.co.uk/

http://www.malachiteconsulting.com/documents/ALTAConference-Laterite Processing Presentation-May 09-Rev 2.pdf

http://www.insg.org/presents/Mr_Widmer_Oct09.pdf http://www.larco.gr/nickel.php

4.5章

AKBN (2008): Natural resources in Albania, brochure prepared by AKBN

AKBN, (2009), Dynamic development of mining industry for the period 2005-2008, AKBN internal report (in Albanian)

ITNPM and AGS (2005): Strategy for the development of the mining Industry based on the regional policies designed for the effective management of the current mineral resources and those to be discovered over a 15-year long period, Ministry of Economy, trade and Energy, Republic of Albania.