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シリア・アラブ共和国
全国環境モニタリング能力
強化計画プロジェクト

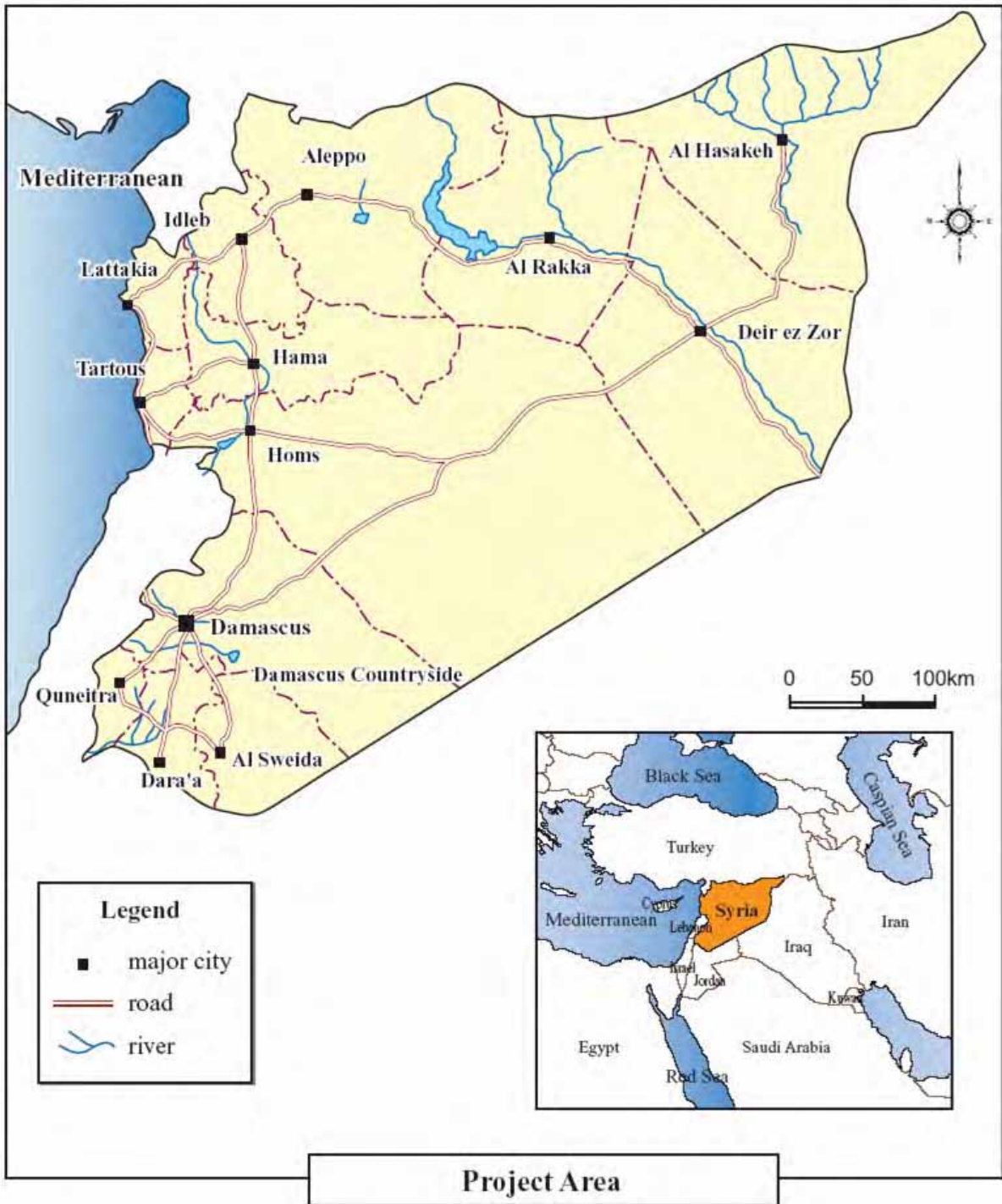
プロジェクト事業完了報告書
(本編)

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シリア・アラブ共和国
 全国環境モニタリング能力強化計画プロジェクト
 プロジェクト事業完了報告書
 (本編)

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略語表

| プロジェクト関係組織・機関 | | | 化学・分析機材 | | |
|---------------|--|------------------------------|-----------------|---|-------------------|
| AEC | Atomic Energy Commission of Syria | シリア原子力委員会 | AAS | Atomic Absorption Spectrophotometer | 原子吸光光度計 |
| DFEA | Directorate for Environmental Affaires | 地方環境局 | AQ | Air Quality Analysis | 大気質分析 |
| C/P | Counterpart | カウンターパート | BW | Basic Water Quality Analysis | 簡易水質分析 |
| CCC | Cairo Central Center | カイロ中央センター | BOD | Biochemical Oxygen Demand | 生物化学的酸素要求量 |
| COI | Chamber of Industry | 工業会議所 | CB | Chemical and Biological Analysis | 一般理化学分析 |
| EEAA | Egyptian Environmental Affaires Agency | エジプト環境庁 | Cl | Chloride | 塩素 |
| EOJ | Embassy of Japan in Syria | 日本大使館 | CO | Carbon Monoxide | 一酸化炭素 |
| ERL | Environmental Research Laboratory (in HIAST) | 環境研究ラボラトリー | COD | Chemical Oxygen Demand | 化学的酸素要求量 |
| ESC | Center for Environmental Studies (former Scientific and Environmental Research Center: SERC) | 環境研究センター (旧SERC: 科学環境研究センター) | DM | Data Management | データマネジメント |
| GCEA | General Commission for Environmental Affaires | 環境総局 | DO | Dissolved Oxygen | 溶存酸素 |
| HCES | Higher Council for Environmental Safety | 環境安全高等会議 | EC | Electric Conductivity | 電気伝導度 |
| HIAST | Higher Institute of Applied Science and Technology | 科学技術適用高等会議 | GC | Gas Chromatograph | ガスクロマトグラフ |
| ITRC | Industrial Testing and Research Center in the Ministry of Industry | 工業省工業試験研究センター | GC/MS | Gas Chromatograph Mass Spectrometer | ガスクロマトグラフ質量分析計 |
| JET | JICA Expert Team | JICA専門家チーム | HC | Hydrocarbon | 炭化水素 |
| JOCV | Japan Overseas Cooperation Volunteers | 青年海外協力隊 | HM | Heavy Metal Analysis | 重金属分析 |
| MAWRED | The Modernizing and Activating Woman's Role in Economic Development | 経済開発における婦人の近代化と活性化 | IC | Ion Chromatograph | イオンクロマトグラフ |
| METAP | Mediterranean Environmental Technical Assistance Program | 地中海環境技術協力プログラム | ICP | Inductively Coupled Plasma | ICP発光分光光度計 |
| MOA | Ministry of Agriculture | 農業省 | NOx | Nitrogen Oxide | 窒素酸化物 |
| MOH | Ministry of Health | 保健省 | NO ₂ | Nitrite | 亜硝酸態窒素 |
| MOIn | Ministry of Industry | 工業省 | NO ₃ | Nitrate | 硝酸態窒素 |
| MOIr | Ministry of Irrigation | 灌漑省 | O/M | Operation and Maintenance | 維持管理 |
| MOLAE | Ministry of Local Administration and Environment | 地方自治環境省 | Ox | Oxidant | オキシダント |
| NEAP | National Environmental Action Plan | 国家環境活動計画 | PA | Public Awareness | 住民啓発 |
| NGO | Non Governmental Organization | 非政府組織 | pH | Hydrogen Ion Exponent | 水素イオン濃度 |
| RBO | Regional Branch Office | 環境支局 | PO ₄ | Phosphate Ion | 磷酸態リン |
| SASMO | Syrian Arab Organization for Standardization and Metrology | シリア国標準度量衡機構 | QA/QC | Quality Assurance and Quality Control | 品質保証/品質管理 |
| SPC | State Planning Commission | 国家計画委員会 | SPM | Suspended Particulate Matters | 浮遊状粒子物質 |
| St/C | Steering Committee | ステアリングコミTEE | SPM10 | Particulate Matters less than 10 micrometer | 10ミクロン以下の浮遊状粒子物質 |
| SV | Senior Volunteers | シニアボランティア | SO ₂ | Sulfur Dioxide | 二酸化硫黄 |
| T/C | Technical Committee | テクニカルコミTEE | SOP | Standard Operation Procedure | 標準作業手順書 |
| 報告書・ミニッツ | | | SPM | Suspended Particulate Matters | 浮遊状粒子物質 |
| | | | SS | Suspended Solids | 浮遊状物質 |
| EIA | Environmental Impact Assessment | 環境影響評価 | StM | The Standard Methods for the Examination of Water and Wastewater 20th Edition | 水と廃水に関する標準試験法第20版 |
| EMO | Environmental Monitoring Plan | 環境モニタリング | TDS | Total Dissolved Solid | 全溶解性物質 |
| M/M | Minutes of Meeting | 協議議事録 | TOC | Total Organic Carbon | 全有機炭素 |
| PO | Plan of Operation | 実施計画 | TSP | Total Suspended Particulate | 全浮遊状物質 |
| PDM | Project Design Matrix | プロジェクトデザインマトリックス | UV/VIS | Ultraviolet/Visible Spectrophotometer | 分光光度計 |
| R/D | Record of Discussions | 実施協議議事録 | VOC | Volatile Organic Caron | 揮発性有機炭素 |

1. 序

1.1 目的

全国環境モニタリング能力強化計画業務(以下、本業務)の最終目標は活動対象となる地方環境局が自ら立てた計画に従って、定期的な環境監視と分析データの蓄積・管理を行い、観測結果の公表を含む住民の意識啓発のための活動を実施する能力を有するようになることである。したがって、本業務の目的は以下の通りである。

- 1) 地方行政環境省(MOLAE)の環境総局(GCEA)及び地方環境局(DFEA)による水質・大気質に関する定期モニタリングの導入と実施。
- 2) 上記モニタリングによって得られるデータの公表に向けた管理と活用及び住民への環境啓発活動向上。

1.2 内容

本業務は以下に示すGCEA及び14のDFEAを対象とする(目次前の添付図参照)。

| No | 英名 | 和名 |
|----|--|--------------|
| 1 | General Commission for Environmental Affaires (GCEA) | 環境総局、地方行政環境省 |
| 2 | Damascus Directorate for Environmental Affaires (DFEA) | ダマスカス地方環境局 |
| 3 | Damascus Countryside DFEA | ダマスカス郊外地方環境局 |
| 4 | Aleppo DFEA | アレッポ地方環境局 |
| 5 | Homs DFEA | ホムス地方環境局 |
| 6 | Hama DFEA | ハマ地方環境局 |
| 7 | Lattakia DFEA | ラタキア地方環境局 |
| 8 | Deir ez Zor DFEA | デリゾール地方環境局 |
| 9 | Idleb DFEA | イドリブ地方環境局 |
| 10 | Hasakeh DFEA | ハッサケ地方環境局 |
| 11 | Al Rakka DFEA | ラッカ地方環境局 |
| 12 | Sweida DFEA | スエイダ地方環境局 |
| 13 | Dara'a DFEA | ダラー地方環境局 |
| 14 | Tartous DFEA | タルトゥス地方環境局 |
| 15 | Quneitra DFEA | クネイトラ地方環境局 |

本業務は2004年9月9日付の実施協議議事録(R/D)及びミニッツ(M/M)に準拠して実施され、その成果と活動内容は以下に示すとおりである。

成果と活動内容

| |
|---|
| 成果-1: ラボラトリ職員のサンプリング、分析技術能力が向上する |
| 1) モニタリング計画立案、サンプリング、分析、解析・評価、データファイリング、報告に関する理論研修の実施 |
| 2) モニタリング計画立案、サンプリング、前処理、分析、精査、評価、データファイリング、報告に関する実務研修の実施 |
| 3) モニタリング計画立案、サンプリング、分析、評価、データファイリングに関するOJT研修の実施 |
| 成果-2: ラボラトリ職員によってラボラトリの適切な管理がなされる |
| 1) 機材のO/M、スペア、試薬貯蔵と処理、ラボの固形・液体廃棄物処理他に関するラボラトリO/Mマニュアルの作成 |
| 2) 上記に関する実務研修の実施 |
| 3) 定期モニタリング実施のための予算計画立案に関する支援と指導の実施 |
| 成果-3: 環境分析データが蓄積され、適切な管理がなされる |
| 1) 環境総局ならびにラボラトリのためのモニタリングデータ記録フォーマットの作成 |
| 2) 地方環境局におけるモニタリングデータ記録の整理・保存 |
| 3) モニタリングデータ記録の環境総局への送付 |
| 成果-4: ラボラトリ職員が項目設定を行い、環境モニタリング計画を作成できる |
| 1) 予備的汚染源情報調査の実施 |
| 2) モニタリング地点及び項目の特定 |

| | |
|--|---|
| | 3) ラボラトリO/Mマニュアルの作成 |
| | 4) 既存環境モニタリングガイドラインの集約と基準作成のための支援と指導の実施 |
| 成果-5: プロジェクトの結果やデータが公表され、市民に共有される。地方環境局職員が意識啓発・環境教育の行動計画を作成できる | |
| | 1) 各県における意識啓発・環境教育活動に関する予備的調査の実施 |
| | 2) 環境教育に関するテキスト、マニュアル、パンフレットの作成 |
| | 3) 教育機関、NGOなどを対象としたセミナー、ワークショップの実施 |
| | 4) 各県における環境教育関連組織、機関間協力体制の強化 |

1.3 環境総局の組織図

環境総局の組織図は次頁に示した通りである。

1.4 プロジェクトデザインマトリックス (PDM)

2004年9月9日に合意された実施協議議事録(R/D)に準拠したオリジナルのプロジェクトデザインマトリックス(PDM)と実施計画(PO)は以下に示した通りである。

1.5 プロジェクトの作業全体フロー

プロジェクト期間は2004年12月から2007年12月までの約3年間であり、その作業全体フローは次頁に示した通りである。

Original Project Design Matrix (PDM) Based on R/D on 9 Sept. 2004 (1/3)

Annex-6 Tentative Project Design Matrix (PDM)

Project Name: Capacity Development on Environmental Monitoring of Directorates for Environmental Affairs in Governorates in Syrian Arab Republic
Target Area: 14 Governorates (different target level is targeted) **Target Group:** -seventy-six (76) staff of the Directorates and MOLAE
 -all (about 300) the staff of the Directorates and MOLAE
 -attendees for seminars and workshops held by the Directorates especially 9.2 million inhabitants of Syria,
 and Homs Governorates

Date of Issue: 13 August 2004

Project Duration: from January 2005 to January 2008 (3 years)

Revision No. : for R/D attachment

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|--|--|--|--|
| <p>Overall Goal Environmental monitoring system and publication of the monitoring results are introduced and disseminated to all the Directorates.</p> | <p>1. All the Directorates conduct monitoring of air on regular basis according to the monitoring plan formulated by themselves by five years after the completion of the project 2. Roles for the national monitoring system are properly allocated among the Directorates. (reference system) 3. Results of the monitoring is continuously issued and opened to the public as an annual report at all Governorates. 4. Results of the monitoring is issued and opened to the public as an annual report at the national level.</p> | <p>1. Monitoring records kept by the GCEA, MOLAE. 2. Annual report issued by all Directorates. 3. Annual report issued by the GCEA, MOLAE.</p> | <p>The Syrian government keeps its policy support for environmental protection.</p> |
| <p>Project Purpose The target Directorates for Environmental Affairs in Governorates are capable to introduce and conduct regular monitoring of required parameters for water and air quality according to the monitoring plan formulated by the Directorates themselves and to implement activities for public awareness including publication of the monitoring results.</p> | <p>1. Analysis technology level to be targeted is as follows: ■Damascus : (water) chemical and biological analysis level (air) basic sampling level (manual) ■Aleppo and Homs : (water) basic analysis level, (air) basic sampling level (manual) ■other 11 Directorates: (water) manual sampling level (air) not included to the project 2. The target Directorates conduct monitoring of water and air on regular basis according to the monitoring plan formulated by themselves 3. Activities for public awareness are implemented in four (4) Directorates at least out of fourteen (14) Directorates. 4. Monitoring results are issued and continuously opened to the public as an annual report at Governorate level.</p> | <p>1. Monitoring records kept by the target Directorates and GCEA. 2. Annual report issued by the target Directorates.</p> | <p>The Syrian government keeps its policy support to provide staff, equipment and budget to the rest of the Directorates</p> |
| <p>Outputs In the target Directorates: 1. Technical level of laboratory staff concerning environmental sampling and analysis is improved.</p> | <p>1-1 All laboratory staff conduct environmental monitoring according to the SOP compiled by the project by three years after the commencement of the project. 1-2 All laboratory staff reach the grade B* level on monitoring items in charge by three years after the commencement of the project. 1-3 50% of laboratory staff reach the grade A* level on monitoring items in charge by three years after the commencement of the project.</p> | <p>1-1 Environmental monitoring records 1-2 Training record 1-3 Training record</p> | <p>Execution instructions are promulgated.</p> |

Original Project Design Matrix (PDM) Based on R/D on 9 Sept. 2004 (2/3)

| | | | |
|---|---|---|--|
| <p>2. Laboratories are properly managed by laboratory staff themselves.</p> | <p>2-1 Equipment in laboratories are properly operated and maintained according to the o/m manual compiled by the laboratory staff by three years after the commencement of the project. 2-2 Spare parts and consumable materials management system is established by three years after the commencement of the project. 2-3 Chemical reagents are properly stored and cared according to the o/m manual by three years after the commencement of the project. 2-4 Liquid and solid wastes from laboratory are properly treated according to the o/m manual by three years after the commencement of the project. 2-5 Each Directorate prepares its budget plan for regular monitoring.</p> | <p>2-1 O/m record 2-2 Spare parts & suppliers list 2-3 O/m record 2-4 O/m record 2-5 Annual budget of Directorates</p> | |
| <p>3. Environmental analysis data is accumulated and properly managed.</p> | <p>3-1 Monitoring data collected and analyzed are accumulated in the monitoring records by three years after the commencement of the project.</p> | <p>3-1 Data file management record</p> | |
| <p>4. Laboratory staff is able to formulate an environmental monitoring plan specifying parameters required.</p> | <p>4-1 Environmental monitoring plan specifying parameters and monitoring sites is formulated in respective laboratory by one year after the commencement of the project. 4-2 Existing environmental monitoring guideline is integrated into a standard for all laboratories by three years after the commencement of the project.</p> | <p>4-1 Monitoring guideline 4-2 Laboratory operation and maintenance manual (o/m manual)</p> | |
| <p>5. The results and data acquired by the Project is open to and shared with the citizens of the target Directorates. Staff of target Directorates is able to formulate its action plan for public awareness and environmental education.</p> | <p>5-1 Preliminary condition on public awareness is comprehended by each governorates and shared among the organizations concerned. 5-2 Materials for activities for public awareness, such as textbooks, manuals, and pamphlets are prepared. 5-3 Seminars and workshops targeted for educational institutions and so forth are conducted. 5-4 Periodical network meeting among organization and/or institutions regarding to environmental education in each governorate are organized.</p> | <p>5-1 Report of preliminary survey at each governorate 5-2 List of activity materials 5-3 Report of seminars and workshops 5-4 Report or minutes of meeting</p> | |
| <p>Activities 1.1 Completion of the SOP for samplings, analysis, interpretation, evaluation, data filing and reporting. 1.2 Training in theory for making monitoring plans, samplings, analysis, interpretation, evaluation, data filing and reporting. 1.3 Hands-on trainings in sampling, pretreatment, analysis, interpretation, evaluation, data filing and reporting. 1.4 On-site OJT in sampling, analysis, interpretation, evaluation, data filing and reporting.</p> | | <p>Inputs Syrian Side Inputs (1) Land, building, laboratories, office space and other necessary facilities for the project. (2) Assignment of counterparts and administrative personnel. (3) Running expenses for the implementation of the project. Japanese Side Inputs (1) Dispatch of experts team (2) Provision of equipment</p> | |
| <p>Important Assumptions Laboratory staffs trained by the project stay in laboratories and keep working on the environmental monitoring. Agents/manufactures timely provide spare parts for the equipment.</p> | | | |

Original Project Design Matrix (PDM) Based on R/D on 9 Sept. 2004 (3/3)

| | |
|--|---|
| <p>2.1 Completion of the laboratory o/m manual for equipment operation and maintenance, spare parts preparation, reagents storage and treatment, liquid and solid laboratory wastes treatment and others.</p> <p>2.2 Hands-on trainings at equipment operation and maintenance, reagents storage and treatment, liquid and solid laboratory wastes treatment and others.</p> <p>2.3 Provide necessary assistance and guidance to prepare Directorates' budget plan for regular monitoring.</p> <p>3.1 Design the monitoring record formats for laboratories and for the GCEA in the MOLAE.</p> <p>3.2 Compile monitoring records in each Directorate.</p> <p>3.3 Send the monitoring records from Directorates to the GCEA in the MOLAE.</p> <p>4.1 Conduct preliminary pollution source inventory surveys.</p> <p>4.2 Specify monitoring sites and their parameters.</p> <p>4.3 Formulate the environmental monitoring plan specifying parameters and monitoring sites in respective laboratory.</p> <p>4.4 Provide necessary assistance and guidance to integrate the existing environmental monitoring guideline into a standard for all laboratories.</p> <p>5.1 To conduct preliminary survey on activities regarding to environmental education and public awareness in each governorate</p> <p>5.2 To formulate textbooks, manuals, and pamphlets for environmental education.</p> <p>5.3 To implement seminars and workshops targeted for educational institutions and NGOs and so forth.</p> <p>5.4 To enhance the cooperation among organizations and/or institutions regarding to environmental education in each governorate (ex. to implement periodical meeting)</p> | <p>Pre-conditions</p> <p>1. Appropriate number of laboratory staff who have chemical background are assigned in the target Directorates for Environmental Affairs in Governorates.</p> <p>2. Laboratory spaces are prepared in the target Directorates for Environmental Affairs in Governorates.</p> <p>3. Adequate waste water treatment plants shall be prepared before starting laboratory chemical analysis training in the target Directorates for Environmental Affairs in Governorates.</p> |
|--|---|

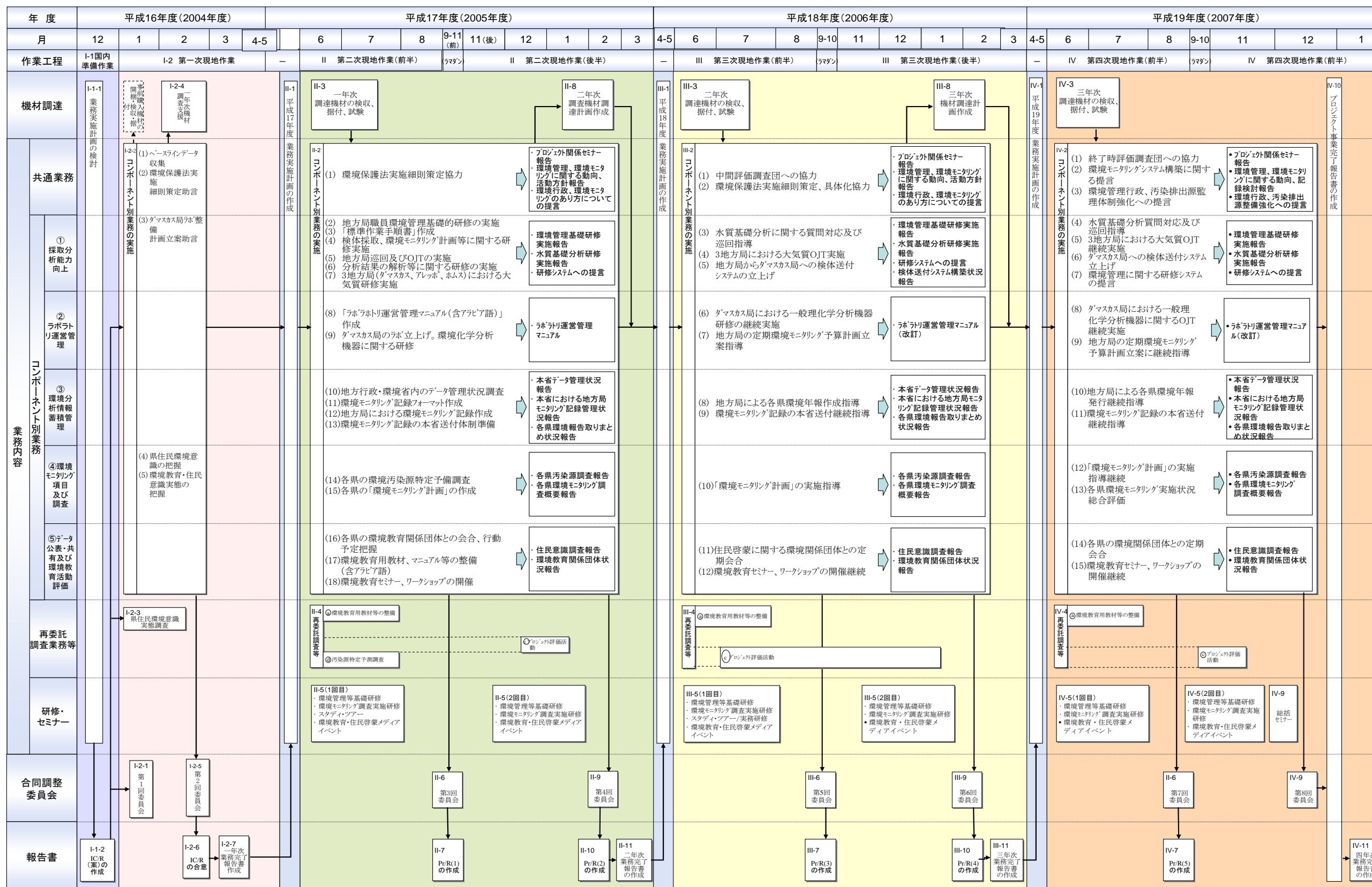
Note: 1. *Grade A : be able to analyze samples, evaluate the data, and determine them on his/her own.
 2. *Grade B: be able to analyze samples and work out the data, but need decision by the superior to evaluate and determine the data.

Abbreviations: MOLAE: the Ministry of Local Administration and Environment
 Directorate: Directorate for Environmental Affairs in Governorate
 GCEA: General Commission for Environmental Affairs, MOLAE
 SOP: Standard Operation Procedures
 o/m: operation and maintenance
 OJT: On-the-Job Training

Tentative Plan of Operation (PO) Based on R/D on 9 Sept. 2004 (2/2)

| Outputs | Activities | Expected Results | Japanese Experts | System C/P | Schedule | | | | | | | | | | | | | | | |
|--|---|---|--|--|-----------|-----|----|-----------|----|-----|-----------|---|----|------|----|---|----|-----|----|---|
| | | | | | Year 2005 | | | Year 2006 | | | Year 2007 | | | 2008 | | | | | | |
| | | | | | IV | III | II | I | IV | III | II | I | IV | III | II | I | IV | III | II | I |
| Output 3 Environmental analysis data is accumulated and properly managed. | 3.1 Design the monitoring record forms for laboratories and for the Decision Supporting Unit in the MOLAE. | Monitoring report format for Directorates Monitoring report format for DDU | Environmental admin. Data Management | Environmental admin. Data Management | | | | | | | | | | | | | | | | |
| | 3.2 Compile monitoring records in each Directorate. | Environmental monitoring records | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| Output 4 Laboratory staff is able to formulate an environmental monitoring plan specifying parameters required. | 3.3 Send the monitoring records from Directorates to the OCEA in the MOLAE. | | Environmental admin. Data Management | Environmental admin. Data Management | | | | | | | | | | | | | | | | |
| | 4.1 Conduct preliminary pollution source inventory surveys. | Report of surveys conducted | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| Output 5 The results and data acquired by the Project is open to and shared with the citizens of the target Directorates. Staff of target Directorates is able to formulate an action plan for public awareness and environmental education | 4.2 Specify monitoring sites and their parameters. | Number of monitoring sites | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| | 4.3 Formulate the environmental monitoring plan specifying parameters required. | Environmental monitoring plan for each Directorate | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| Output 5 The results and data acquired by the Project is open to and shared with the citizens of the target Directorates. Staff of target Directorates is able to formulate an action plan for public awareness and environmental education | 4.4 Provide necessary assistance and guidance to integrate the existing environmental monitoring activities into a standard for all public awareness in each Directorate. | Report of preliminary survey conducted | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| | 5.1 Conduct preliminary survey on activities regarding to environmental education and public awareness in each Directorate. | Report of preliminary survey conducted | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| Output 5 The results and data acquired by the Project is open to and shared with the citizens of the target Directorates. Staff of target Directorates is able to formulate an action plan for public awareness and environmental education | 5.2 Formulate textbooks, manuals, and pamphlets for environmental education. | Textbooks, manuals and pamphlets made by the Project | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| | 5.3 Implement seminars and workshops targeted for educational institutions and NGOs and so on. | Report of seminars and workshops implemented | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| Output 5 The results and data acquired by the Project is open to and shared with the citizens of the target Directorates. Staff of target Directorates is able to formulate an action plan for public awareness and environmental education | 5.4 Enhance the cooperation among organizations and institutions regarding to environmental education in each Directorate (i.e. To implement methodical meeting). | Report of Meetings | Environmental admin. Water quality analysis Air quality analysis | Environmental admin. Water quality analysis Air quality analysis | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

C/P: Counterpart Personnel
 MOLAE: Ministry of Local Administration and Environment
 GCEA: General Council for Environmental Affairs, MOLAE
 SOP: Standard Operation Procedures
 O/M: Operation & Maintenance



作業全体フロー

1.5 プロジェクトの組織体制

(1) ステアリングコミティー(St/C)

ステアリングコミティー(St/C)の機能は以下の通りとし、少なくとも年1回以上あるいは必要に応じて随時開催すること、メンバーは下表の通りとし、議長を地方自治環境省(MOLAE)大臣とすること、を2005年2月23日に開催された第2回St/Cにおいて合意した。

- 1) プロジェクトの年間活動計画の策定
- 2) 年間活動計画実績ならびにプロジェクト進捗状況の確認
- 3) プロジェクトの実施を通じて惹起した主要な問題に対するレビューと意見交換
- 4) プロジェクトに係る事項の内、他省庁との連携に係る事項の協議

St/Cメンバーリスト(2007年12月現在)

| ステアリングコミティー (St/C) | | |
|--------------------|--------------------------------|---|
| | 名前 | 役職 |
| シリア側 | 1. Eng. Helal Al-Atrash | Minister of MOLAE |
| | 2. Eng. Imad Hassoun | Deputy Minister for Environmental Affairs |
| | 3. Dr. Bashr Al Sabhan | Governor of Damascus |
| | 4. Dr. Akram Khouri | General Director of GCEA, MOLAE |
| | 5. Dr. Mahmmoud Saleh Soleiman | Director of the Center of the Environmental Studies (CES) |
| | 6. Eng. Atef Deeb | Director of Combating Pollution of Public Water, Ministry of Irrigation |
| | 7. Eng. Shurahbeel Hijazi | Director of Central Laboratory, Ministry of Housing and Construction |
| | 8. Eng. Amal Hasan | Department for Environment, Ministry of Industry |
| | 9. Dr. Mahmmoud Al-Haffar | Department for Environment, Ministry of Transport |
| | 10. Dr. Mahmmoud Krayem | Director of Directorate of Communicable and Environmental Disease, Ministry of Health |
| | 11. Dr. Omar Abou Awn | Ministry of Education |
| 日本側 | 1. JICA Experts | JICA Expert Team |
| | 2. Ms. Akiko Tomita | Resident Representative, JICA Syria Office |

注)議長に網掛をしている。また、大使館ならびにJICA本部の職員はオブザーバーとして参加した。

(2) テクニカルコミティー(T/C)

テクニカルコミティー(T/C)は、ラボラトリ、水質、大気質、環境教育(E&E)・住民啓発分野のワーキンググループで構成され、少なくとも年4回あるいは以下に示す役割が求められた場合には必要に応じて随時開催すること、を2005年2月23日に開催された第2回St/Cにおいて合意した。T/Cの議長は環境総局(GCEA) 局長とし、メンバーは下表の通りである。議長はメンバーリストに基き、協議事項の内容に応じて適切なメンバーを招聘するものとする。

- 1) プロジェクトの年間活動計画に基づく月次の活動計画と内容の策定
- 2) 活動計画実績ならびにプロジェクト進捗状況のレビュー
- 3) プロジェクトの達成度評価
- 4) プロジェクトの実施に関して惹起した問題に対する意見交換
- 5) プロジェクト活動の実施

T/Cメンバーリスト(2007年12月現在)

| テクニカルコミティ (T/C) | | |
|-----------------|--------------------------------|---|
| | 名前 | 役職 |
| シリア側 | 1. Dr. Akram Khouri | General Director of GCEA, MOLAE |
| | 2. Eng.Reem Aed Raboh | Director of Directorate for Water Safety |
| | 3. Eng. Fuad Alok | Director of Directorate for Chemical Safety |
| | 4. Eng.Khaled Kilali | Director of Directorate for Climate and Atmosphere |
| | 5. Dr. Nader Ghazi | Director of Directorate for Awareness and Environmental Information |
| | 6. Eng.Erfan Ali | Director of Directorate for Information and Systems |
| | 7. Dr. Yasin Moalla | Director of Directorate for Laboratories |
| | 8. Mr.Mohammad Albakri | Director of Directorate for Planning and Follow-up |
| | 9. Eng.Bassam Khier Biek | Director of Damascus Directorate |
| | 10. Eng.Thā'er Dief | Director of Damascus Countryside Directorate |
| | 11. Mr. Ahmad Kablawee | Director of Dara'a Directorate |
| | 12. Mr.Hamzah Solyman | Director of Quneitra Directorate |
| | 13. Dr. Mo'tasem Al-Abed | Director of Sweida Directorate |
| | 14. Ch. Solyman Kalo | Director of Homs Directorate |
| | 15. Ch.Ali Jwyed | Director of Hama Directorate |
| | 16. Eng.Jomana Hasan | Director of Idleb Directorate |
| | 17. Eng.M. Saeed Naffous | Director of Aleppo Directorate |
| | 18. Eng.Lama Al-Ahmad | Director of Lattakia Directorate |
| | 19. Eng.Hasan Morjan | Director of Tartous Directorate |
| | 20. Eng.Shams Aljasem | Director of Rakkah Directorate |
| | 21. Eng.Reem Shaheen | Director of Deir ez Zor Directorate |
| | 22. Raeefeh Asper | Director of Hasakeh Directorate |
| | 23. Dr. Marwan Dimashki | Director of Environmental Research Laboratory, HIAST |
| | 24. Dr.Mohammad Saeed Al-Masri | Atomic Energy Commission |
| | 25. Eng. Mayadah Kodmani | Head of the Central Laboratory, Ministry of Irrigation |
| | 26. Dr. Mohammad Rateb Salam | Director of the Central Laboratory, Ministry of Economy and Trade |
| 日本側 | 1. JICA Experts | JICA Expert Team |
| | 2. Ms. Akiko Tomita | Resident Representative, JICA Syria Office |

注)議長に網掛をしている。

(3) カウンターパート (C/P)

シリア側は、GCEAの総局長をプロジェクトダイレクターに任命し、技術カウンターパート(C/P)の他に、以下に示す約20名のプロジェクト運営管理C/Pをアサインした。

プロジェクト運営管理カウンターパート(C/P)リスト(2007年12月現在)

| プロジェクトにおける役職 | 人数 | MOLAEにおける役職 |
|---|----|---|
| 1 Project Director | 1 | General Director of GCEA |
| 2 Project Manager | 1 | Director of Directorate for Laboratories |
| 3 Director for basic analysis for water quality | 1 | Director of Directorate for EIA |
| 4 Director for chemical and biological analysis | 1 | Director of Directorate for Chemical Safety |
| 5 Director for air quality analysis | 1 | Director, Directorate for Air Safety |
| 6 Director for environmental education | 1 | Director, Directorate for Awareness and Environmental Information |
| 7 Director for data management | 1 | Director, Directorate for Information and System |
| 8 Sub-site Directors | 14 | Directors of 14 Target DFEAs |

技術C/Pについては、プロジェクト開始から延べ184名のC/Pがアサインされた。しかし、下表に示すように、兵役、出産、給与処遇などの理由をもって途中で30%(51名)がプロジェクトを離れた。当初、45名のR/Dにリストアップされていた45名の技術C/Pの内、残っているのは33名の

みである。2007年12月現在、新規にアサインされた77名を含む計122名(他技術分野との重複を除く)がプロジェクトに従事している。なお、次頁に184名のC/Pリストを示す。

技術カウンターパート(C/P)数の内訳(2007年12月現在)

| DFEA | | 技術C/P数 | | | | |
|-----------|-------------------------|--------|--------------------|---------------------|----------------|-------|
| | | 合計 | 水質 (Output 1-4) | 大気質 (Output 1-4) | データ マネ ジメント | 住民啓発 |
| 1 | Damascus | 19 | 13 (3) | 3 | 3(1) | 3 |
| 2 | Damascus Countryside | 15 | 15(2) | - | 2 | - |
| 3 | Aleppo | 7 | 5(2) | 4 | 1(1) | 1(1) |
| 4 | Homs | 16 | 10 (3) | 6 | 3 | - |
| 5 | Hama | 6 | 6 | - | 1(1) | - |
| 6 | Lattakia | 14 | 8 | - | 2 | 4 |
| 7 | Deir ez Zor | 4 | 4 | - | 1(1) | - |
| 8 | Idlib | 6 | 4 | - | 2 | - |
| 9 | Hasakeh | 5 | 3 | - | 1 | 1 |
| 10 | Rakka | 3 | 3 | - | - | - |
| 11 | Sweida | 10 | 8 | - | 2 | - |
| 12 | Dara'a | 6 | 5 | - | 1 | - |
| 13 | Tartous | 9 | 6 | - | 1(1) | 3 |
| 14 | Quneitra | 3 | 3 | - | 1(1) | - |
| 延人数(重複含む) | | | 93 (10) | 13 | 20 (5) | 12(1) |
| Net Total | | 122 | 93 | 13 | 15 | 11 |

Note: () は重複者

(4) JICA専門家チーム(JET)

JICA専門家チーム(JET)は下表に示す8名で構成され、そのアサイメントスケジュールは次頁に示した通りである。

JICA専門家チーム(JET)リスト

| 名前 | ポジション |
|----------|-----------------------|
| 1. 岩井 陽一 | チーフアドバイザー/ 環境管理 |
| 2. 松江 龍南 | 水質分析 (簡易分析) |
| 3. 佐藤 信介 | 水質分析 (一般理化学分析-1) |
| 4. 柴 一樹 | 水質分析 (一般理化学分析-2) |
| 5. 木村 光司 | 水質分析 (重金属分析) |
| 6. 平尾 実 | 大気質分析 |
| 7. 青木 智男 | 環境教育/住民啓発 |
| 8. 高橋 圭一 | データマネジメント/業務調整 (調達管理) |

注) 2007年12月現在

これまでアサインされた技術C/Pリスト(2007年12月現在)

| No. | 名前 | 所属 | 担当 | ポジション | R/D | 現状 | 備考 |
|-----|-----------------------|---------------------------|--|---------------------------------------|-----|----|------------------------|
| 1 | Dr. Yasin Moa'alla | GCEA | Chief of Counterpart | Director, Directorate of Laboratories | X | O | |
| 2 | Mr. Ahmad Al Mohammad | GCEA | Water Quality Analysis | Staff, Directorate of Laboratories | X | X | |
| 3 | Ms. Fathia Mohammad | GCEA | Water Quality Analysis | Chief, Directorate of Laboratories | X | O | |
| 4 | Ms. Fayzeh Hoijeh | GCEA | Public awareness | Staff, Directorate of Laboratories | X | X | Moved out in Nov, 2006 |
| 5 | Ms. Khozama Abo Saab | GCEA | Water Quality Analysis | Directorate of Laboratories | O | O | |
| 6 | Mr. Mouhamed younes | GCEA | Water Quality Analysis | Directorate of Laboratories | X | O | Moved in Jan. 2006 |
| 7 | Mr. Shaka Soliman | GCEA | Data Management | Head of Chemical Safety Dept. | X | O | |
| 8 | Ms. Alia Badran | GCEA | Data Management | staff | X | O | |
| 9 | Mr. Molhem Darwish | GCEA | Data Management | staff | X | O | |
| 10 | Mr. Maan Ablali | GCEA | Public awareness | Staff | X | O | Moved in May. 2006 |
| 11 | Ms. Gloria Mousa | GCEA | Public awareness | Staff | X | O | Moved in May. 2006 |
| 12 | Ms. Riem Sadr Alden | Damascus DFEA | Heavy metal(Atomic absorption) | Lab chief | X | O | |
| 13 | Ms. Iman Sulayman | Damascus DFEA | Heavy metal(Atomic absorption) | Staff | X | O | |
| 14 | Ms. Sohad Sida | Damascus DFEA | Heavy metal(Atomic absorption) | Staff | X | O | |
| 15 | Mr. Tallat Harb | Damascus DFEA | Heavy metal(Atomic absorption) | Staff | X | O | |
| 16 | Mr. Samer Khouri | Damascus DFEA | Heavy metal(Atomic absorption) | Staff | X | O | |
| 17 | Mr. Samer Mokbel | Damascus DFEA | Chemical and Biological Analysis/Basic water quality | Staff | X | O | |
| 18 | Ms. Layla Al Durra | Damascus DFEA | Chemical and Biological Analysis/Basic water quality | Staff | O | O | |
| 19 | Ms. Assma Altabakh | Damascus DFEA | Chemical and Biological Analysis/Basic water quality | Staff | X | O | |
| 20 | Ms. Amara Alhamwy | Damascus DFEA | Chemical and Biological Analysis | Staff | X | O | Moved in Jul. 2006 |
| 21 | Ms. Inas Webby | Damascus DFEA | Chemical and Biological Analysis | Staff | X | O | |
| 22 | Ms. Raniya Sulayman | Damascus DFEA | Chemical and Biological Analysis | Staff | O | O | |
| 23 | Mr. Khaled Kasem | Damascus DFEA | Basic water quality | Staff | O | X | Moved out in Nov. 2005 |
| 24 | Mr. Moneer Mostaf | Damascus DFEA | Air Quality Analysis | Staff | X | O | |
| 25 | Ms. Firyal Al Husayni | Damascus DFEA | Air Quality Analysis | Staff | O | O | |
| 26 | Ms. Omaima Younes | Damascus DFEA | Air Quality Analysis | Staff | O | O | |
| 27 | Ms. Hiba Adrra | Damascus DFEA | Air Quality Analysis | Staff | X | O | Moved in Sep. 2007 |
| 28 | Ms. Rafah Zaghmout | Damascus DFEA | Air Quality Analysis | Staff | X | X | Maternity holiday |
| 29 | Mr. Moa'taz Abdulla | Damascus DFEA | Air Quality Analysis | Staff | X | O | |
| 30 | Mr. Basasam Fares | Damascus DFEA | Air Quality Analysis | Staff | X | O | |
| 31 | Mr. Almuthanna Ghanem | Damascus DFEA | Data Management | Data management chief | X | O | |
| 32 | Ms. Hanan Sama'n | Damascus DFEA | Data Management | Staff | O | O | |
| 33 | Ms. Yara Ismaeel | Damascus DFEA | Data Management | Staff | X | O | Moved in May. 2007 |
| 34 | Ms. Halah Khouri | Damascus DFEA | Public Awareness | Staff | X | O | Moved in Dec. 2005 |
| 35 | Ms. Silva Ardahaljian | Damascus DFEA | Public Awareness | Staff | X | O | |
| 36 | Ms. Katia Farah | Damascus DFEA | Public Awareness | Staff | X | X | Moved out in Dec. 2005 |
| 37 | Ms. Rasha Mehrez | Damascus DFEA | Public Awareness | Staff | X | O | |
| 38 | Ms. Maria Tama | Damascus DFEA | Public Awareness | Staff | X | X | Moved out in Jun. 2006 |
| 39 | Mr. Thaer Daif | Damascus Countryside DFEA | Public Awareness | Director | O | O | |

| No. | 名前 | 所属 | 担当 | ポジション | R/D | 現状 | 備考 |
|-----|-----------------------------|---------------------------|---|-----------------------------|-----|----|----------------------------|
| 40 | Ms. Muna Al Joma`a | Damascus Countryside DFEA | Water Quality Analysis | Laboratory chief | X | O | |
| 41 | Mr. Malek Soliman | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | O | Moved in Dec. 2005 |
| 42 | Ms. Mona Sabrogy | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | One year vacation |
| 43 | Mr. Muneer Sarhan | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Moved out into EIA Dept. |
| 44 | Mr. Hosam Eddin Al-Barodi | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Moved out in Nov. 2005 |
| 45 | Ms. Shireen Awad | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Moved out in Sep. 2005 |
| 46 | Ms. Nisreen Dawoud | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Moved out in Sep. 2005 |
| 47 | Ms. Lina Yousef | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 48 | Mr. Eyad Hmayeer | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Moved out in Sep. 2006 |
| 49 | Mr. Ammar Hassan | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Military service |
| 50 | Mr. Mohammed Hassan Diab | Damascus Countryside DFEA | Water Quality Analysis/Data management | Staff | X | X | Moved out in Aug. 2005 |
| 51 | Mr. Nader Tayem | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | X | Military service |
| 52 | Ms. Rania Karawi | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | O | Moved in Mar. 2006 |
| 53 | Ms. Hana Bairoti | Damascus Countryside DFEA | Water Quality Analysis | Staff | X | O | Moved in Aug. 2007 |
| 54 | Ms. Dana Fuad Altahan | Damascus Countryside DFEA | Data Management | Staff | X | O | Moved in Jun. 2006 |
| 55 | Mr. Moustafa Khazma | Damascus Countryside DFEA | Public Awareness | Staff | X | O | |
| 56 | Mr. Ali Kasem Shaweesh. | Damascus Countryside DFEA | Data Management/ Water Quality Analysis | Staff | X | X | Military service |
| 57 | Mr. Ahmad Mo'ala Ahmad | Aleppo DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 58 | Mr. Mohammad Hammadeh | Aleppo DFEA | Water Quality Analysis | Staff | X | O | Moved in Dec. 2005 |
| 59 | Mr. Mohammad Rasheed | Aleppo DFEA | Water Quality Analysis | Staff | X | X | Military service |
| 60 | Ms. Hiba Hudari | Aleppo DFEA | Water Quality Analysis | Staff | X | O | Moved in Nov. 2007 |
| 61 | Mr. Mahmoud Hassan Essmae'l | Aleppo DFEA | Air Quality Analysis | Staff | O | O | |
| 62 | Ms. Khlood Awayed | Aleppo DFEA | Air Quality Analysis | Staff | X | O | |
| 63 | Mr. Abd Albaset Isa | Aleppo DFEA | Air Quality Analysis | Staff | X | O | Moved in Nov. 2007 |
| 64 | Ms. Donia Gharieb | Aleppo DFEA | Air Quality Analysis | Staff | O | O | |
| 65 | Mr. Ilia Wasel | Aleppo DFEA | Air Quality Analysis/Data management | Staff | O | O | |
| 66 | Ms. Waffa Kraim | Aleppo DFEA | Public Awareness | Staff | X | O | Moved in Jul. 2005 |
| 67 | Mr. Muhamed Ali Al Husien | Homs DFEA | Water Quality Analysis/Air Quality Analysis | Laboratory chief | O | O | |
| 68 | Ms. Heba Kassab | Homs DFEA | Water Quality Analysis/Air Quality Analysis | Staff | X | X | Moved out in Jan. 30. 2007 |
| 69 | Ms. Itidal Awad | Homs DFEA | Water Quality Analysis/Air Quality Analysis | Mobile lab chief | O | O | |
| 70 | Ms. Rasha Jabbour | Homs DFEA | Water Quality Analysis/Data management | Staff | X | O | Moved in Jul. 2005 |
| 71 | Ms. Nida'a Toghaji | Homs DFEA | Water Quality Analysis/Air Quality Analysis | Staff | X | O | |
| 72 | Ms. Lubna Al- Ahmad | Homs DFEA | Water Quality Analysis/Air Quality Analysis | Staff | X | O | Moved in Jul. 2005 |
| 73 | Ms. Faten Harmoush | Homs DFEA | Water Quality Analysis | Staff | X | O | Moved from DAMC DFEA |
| 74 | Ms. Sana Mansour | Homs DFEA | Water Quality Analysis | Head of air quality section | O | O | |
| 75 | Ms. Layla Almubaid | Homs DFEA | Water Quality Analysis | Staff | X | O | Moved in Oct. 2007 |
| 76 | Ms. Ramia Alkholi | Homs DFEA | Water Quality Analysis | Staff | X | O | Moved in Oct. 2007 |
| 77 | Mr. Abed Alaleem | Homs DFEA | Water Quality Analysis | Staff | X | O | Moved in Oct. 2007 |
| 78 | Mr. Mahmoud Al yousef | Homs DFEA | Air Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 79 | Ms. Rasha Romia | Homs DFEA | Air Quality Analysis | Staff | X | X | One year vacation |
| 80 | Ms. Alisar Kasab | Homs DFEA | Air Quality Analysis | Staff | O | X | Moved out in Aug. 2005 |

| No. | 名前 | 所属 | 担当 | ポジション | R/D | 現状 | 備考 |
|-----|-----------------------------|------------------|--|----------------------|-----|----|----------------------------------|
| 81 | Ms. Nisreen Toameh | Homs DFEA | Air Quality Analysis | Staff | X | O | |
| 82 | Mr. Mr. Kousi Yousef | Homs DFEA | Air Quality Analysis | Staff | X | O | Moved in Jun, 2007 |
| 83 | Da'ad Alhasan | Homs DFEA | Air Quality Analysis | Staff | X | X | Moved out in Oct, 2007 |
| 84 | Ms. Aida Halawweek | Homs DFEA | Data Management/Air quality | Staff | X | O | Moved from Damascus C |
| 85 | Ms. Hanan Naffouj | Homs DFEA | Data Management | Staff | O | O | |
| 86 | Ms. Leen Norieh | Homs DFEA | Public Awareness | Staff | X | O | |
| 87 | Ms. Rana Wardeh | Hama DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 88 | Ms. Hebah Khouri | Hama DFEA | Water Quality Analysis | Staff | O | O | |
| 89 | Ms. Reem Kanbar | Hama DFEA | Water Quality Analysis | Staff | O | O | |
| 90 | Ms. Yesra Taifour | Hama DFEA | Water Quality Analysis | Staff | X | O | |
| 91 | Ms. Nameer Warra | Hama DFEA | Water Quality Analysis/Data Management | Staff | X | O | |
| 92 | Ms. Seham Suliman | Hama DFEA | Water Quality Analysis | Staff | X | X | Moved out in April, 2007 |
| 93 | Ms. Yasmin Haidar | Hama DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 94 | Mr. Wassim Al Ali | Hama DFEA | Water Quality Analysis | Staff | X | X | Military Service |
| 95 | Ms. Lama Ahmad | Lattakia DFEA | Public Awareness | Director | O | O | |
| 96 | Ms. Amaal Merhej | Lattakia DFEA | Water Quality Analysis | staff | O | O | |
| 97 | Mr. Senan Deeb | Lattakia DFEA | Water Quality Analysis | Staff | X | O | |
| 98 | Ms. Hadeel Wannus | Lattakia DFEA | Water Quality Analysis | Staff | X | O | Moved in Dec. 2005 |
| 99 | Ms. Suzanne Shdod | Lattakia DFEA | Water Quality Analysis | Staff | X | X | Moved out in May, 2007 |
| 100 | Mr. Wael Jadeed | Lattakia DFEA | Data Management | Staff | O | X | Moved out in Mar. 2006 |
| 101 | Mr. Rami Ali | Lattakia DFEA | Water Quality Analysis | Staff | X | X | Moved out in Dec. 2005 |
| 102 | Dr. Ahmad Karah Ali | Lattakia DFEA | Water Quality Analysis | Staff | O | X | Moved out in Jun. 2005 |
| 103 | Ms. Maya Yasen | Lattakia DFEA | Water Quality Analysis | Staff | X | O | |
| 104 | Mr. Thaer Mohamad | Lattakia DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 105 | Mr. Yamen Salwan | Lattakia DFEA | Water Quality Analysis | Lab chief | X | O | Moved in Jun. 2006 |
| 106 | Ms. Rana Soufi | Lattakia DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 107 | Mr. Mouhamed Melhem | Lattakia DFEA | Water Quality Analysis | Staff | X | O | Moved in Sep. 2007 |
| 108 | Ms. Fatema Armanazi | Lattakia DFEA | Water Quality Analysis | Staff | X | O | Moved in Nov. 2007 |
| 109 | Ms. Bana Auad | Lattakia DFEA | Data Management | Staff | X | O | |
| 110 | Mr. Adel Habib | Lattakia DFEA | Data Management | Staff | X | O | |
| 111 | Ms. Ammal Allo | Lattakia DFEA | Public Awareness | Staff | X | O | Moved in Jan, 2007 |
| 112 | Ms. Awatef Hadad | Lattakia DFEA | Public Awareness | Staff | X | O | Moved in Jan, 2007 |
| 113 | Ms. Kinda Hadad | Lattakia DFEA | Public Awareness | Staff | X | O | Moved in Jan, 2007 |
| 114 | Ms. Samah Abbas | Lattakia DFEA | Public Awareness | Staff | X | O | Moved in Jan, 2007 |
| 115 | Mr. Saher Abdullah | Deir ez Zor DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 116 | Ms. Fathia Moienee | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | O | |
| 117 | Mr. Mohammed Ammen Al Kalaf | Deir ez Zor DFEA | Water Quality Analysis | New director of DFEA | X | O | He is assigned as a new director |
| 118 | Ms. Ghazwa Matroud | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | X | Moved out in May, 2006 |
| 119 | Ms. Isrra Ibrahim | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | X | Moved out in Jun, 2006 |
| 120 | Ms. Rania Kalash | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | X | Moved out in Nov, 2006 |

| No. | 名前 | 所属 | 担当 | ポジション | R/D | 現状 | 備考 |
|-----|-------------------------|------------------|---|---------------------------|-----|----|------------------------|
| 121 | Ms. Rasha Azawi | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | O | |
| 122 | Mr. Omar Almala Ali | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun, 2006 |
| 123 | Ms. Amani Allaji | Deir ez Zor DFEA | Water Quality Analysis | Staff | X | O | Moved in Aug 2007 |
| 124 | Mr. Sameer Da'boul | Idleb DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 125 | Mr. Eiad Al-Husein | Idleb DFEA | Water Quality Analysis/Public Awareness | Staff | X | X | Moved out in Oct,2007 |
| 126 | Mr. Mustafa Al-Dghayem | Idleb DFEA | Water Quality Analysis | Staff | O | O | |
| 127 | Mr. Suhaib Darwish | Idleb DFEA | Water Quality Analysis | Staff | O | X | Moved out in Nov. 2005 |
| 128 | Mr. Mustafa Haddad | Idleb DFEA | Water Quality Analysis | Staff | X | O | |
| 129 | Mr. Mouhamed felfia | Idleb DFEA | Water Quality Analysis | Staff | X | O | Moved in Feb,2007 |
| 130 | Mr. Aiman Kahwaji | Idleb DFEA | Data Management | Staff | X | X | Move out in Aug, 2006 |
| 131 | Mr. Khalid Fashtook | Idleb DFEA | Data Management/Public Awareness | Staff | X | X | Moved out in Nov, 2005 |
| 132 | Mr. Kais Abazli | Idleb DFEA | Data Management | Staff | X | O | |
| 133 | Mr. Khalid Kateeb | Idleb DFEA | Data Management | Staff | X | O | |
| 134 | Mr. Nawaf Othman | Hasakeh DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 135 | Mr. George Shabo | Hasakeh DFEA | Water Quality Analysis | Staff | O | O | |
| 136 | Mr. Aysar Beniameen | Hasakeh DFEA | Water Quality Analysis | Staff | O | O | |
| 137 | Mr. Saddam Esmael | Hasakeh DFEA | Water Quality Analysis | Staff | X | X | Moved out in Nov, 2006 |
| 138 | Mr. Abdulghafour Ismeil | Hasakeh DFEA | Water Quality Analysis | Staff | X | X | Moved out in Jun, 2007 |
| 139 | Mr. Emad Meslet | Hasakeh DFEA | Data Management | Staff | X | O | |
| 140 | Ms. Janet Kivergies | Hasakeh DFEA | Public Awareness | Staff | X | O | |
| 141 | Ms. Shamsa Aljasem | Rakka DFEA | Water Quality Analysis/Public Awareness | Director/Laboratory chief | O | O | |
| 142 | Mr. Mustafa Al-Abu | Rakka DFEA | Water Quality Analysis | Staff | O | X | Moved out in Oct, 2006 |
| 143 | Mr. Thani Al -Abed | Rakka DFEA | Water Quality Analysis | Staff | X | O | Moved in Feb. 2006 |
| 144 | Mr. Nizam Al Ahmad | Rakka DFEA | Water Quality Analysis | Staff | X | X | Moved out in Oct,2007 |
| 145 | Mr. Mohammed Al-Husein | Rakka DFEA | Water Quality Analysis/Data Management | Staff | O | X | Moved out in Oct,2007 |
| 146 | Mr. Adeen Ammouri | Rakka DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 147 | Mr. Talal Alis | Rakka DFEA | Water Quality Analysis | Staff | X | O | Moved in Oct,2007 |
| 148 | Mr. Hasan Aloukla | Rakka DFEA | Water Quality Analysis | Staff | X | O | Moved in Nov,2007 |
| 149 | Mr. Inad Al ouwayyed | Rakka DFEA | Data Management | Staff | X | X | Military Service |
| 150 | Mr. Abdulateef Ja'look | Rakka DFEA | Data Management | Staff | X | O | |
| 151 | Ms. Omay'ma Al-Sha'ar | Sweida DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 152 | Mr. Samer Al Masri | Sweida DFEA | Water Quality Analysis | Staff | X | O | Moved in Aug. 2005 |
| 153 | Ms. Amal Swaidan | Sweida DFEA | Water Quality Analysis | Staff | X | O | |
| 154 | Mr. Thaer Hamzeh | Sweida DFEA | Water Quality Analysis | Staff | X | O | |
| 155 | Ms. Raghad Abu Hasson | Sweida DFEA | Water Quality Analysis | Staff | X | X | |
| 156 | Ms. Hana Abu Zaidan | Sweida DFEA | Water Quality Analysis | Staff | X | O | |
| 157 | Mr. Humam Abo Raid | Sweida DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 158 | Mr. Bashar Aljarmakani | Sweida DFEA | Water Quality Analysis | Staff | X | O | Moved in Dec, 2006 |
| 159 | Ms. Waffa Alsalman | Sweida DFEA | Water Quality Analysis | Staff | X | O | Moved in Mar, 2007 |
| 160 | Ms. Mervat Al Safadi | Sweida DFEA | Data management | Staff | X | X | Moved out in Dec, 2006 |
| 161 | Mr. Wael Abu Ganem | Sweida DFEA | Data management | Staff | X | O | Moved in Jul, 2006 |

| No. | 名前 | 所属 | 担当 | ポジション | R/D | 現状 | 備考 |
|-----|-------------------------|---------------|------------------------|------------------|-------------------|-------------------|--------------------------------|
| 162 | Ms. Soha Nader | Sweida DFEA | Public Awareness | Staff | X | O | |
| 163 | Ms. Majeda Azzam | Sweida DFEA | Public Awareness | Staff | X | X | Moved out in Jul. 2006 |
| 164 | Ms. Fatima Hariri | Dara'a DFEA | Public Awareness | staff | O | X | Moved out in Sep.2007 |
| 165 | Mr. Mohammad Al-hariri | Dara'a DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 166 | Mr. Diea Shabat | Dara'a DFEA | Water Quality Analysis | Staff | X | O | |
| 167 | Mr. Ahmad Kablawi | Dara'a DFEA | Water Quality Analysis | Director | O | O | He is named as a new director. |
| 168 | Mr. Yousef Shadaideh | Dara'a DFEA | Water Quality Analysis | Staff | X | O | |
| 169 | Mr. Mahmoud Aba Zeed | Dara'a DFEA | Water Quality Analysis | Staff | X | O | Moved in Jun. 2006 |
| 170 | Ms. Fathiya Ahmad | Dara'a DFEA | Data Management | Staff | X | O | |
| 171 | Mr. Ateea Zwayda | Dara'a DFEA | Data Management | Staff | X | O | |
| 172 | Ms. Rowdaina Al-Ali | Tartous DFEA | Water Quality Analysis | Laboratory chief | O | O | |
| 173 | Ms. Dalal Ibrahim | Tartous DFEA | Water Quality Analysis | Staff | O | O | |
| 174 | Ms. Sohila Botros | Tartous DFEA | Water Quality Analysis | Staff | O | O | |
| 175 | Ms. Lama Harfoush | Tartous DFEA | Water Quality Analysis | Staff | X | O | |
| 176 | Ms. Smaher Abdul Rahman | Tartous DFEA | Water Quality Analysis | Staff | X | O | |
| 177 | Ms. Ameera Omran | Tartous DFEA | Water Quality Analysis | Staff | O | O | |
| 178 | Mr. Kazem Ahmad | Tartous DFEA | Public Awareness | Staff | X | O | |
| 179 | Ms. Rania Kaddour | Tartous DFEA | Public Awareness | Staff | X | O | |
| 180 | Mr. Allam Ebrahim | Tartous DFEA | Public Awareness | Staff | X | O | |
| 181 | Mr. Hamzeh Soliman | Quneitra DFEA | Water Quality Analysis | Director | X | O | |
| 182 | Mr. Majed Zaitoun | Quneitra DFEA | Water Quality Analysis | Laboratory chief | X | O | |
| 183 | Mr. Ali Ibrahim | Quneitra DFEA | Water Quality Analysis | Staff | O | O | |
| 184 | Mr. Bassam Orabi | Quneitra DFEA | Data Management | Staff | X | X | Moved out in Jul. 2005 |
| | Total | | | | # of O=43 (25.4%) | # of O=139 (3.3%) | |

Note: O = R/Dに記載されていたC/P, ならびに2007年12月現在もアサインされているC/P、 X = R/Dに記載されていないC/P, ならびに2007年12月現在ではアサインされていないC/P

2. 成果達成状況

2.1 上位目標とプロジェクト目標

2004年9月9日付のR/Dに記載されたPDMによれば、本プロジェクトの上位目標は、「環境モニタリングシステムとモニタリングデータの公表が、全地方環境局に導入され、普及すること」と、設定されている。この上位目標の達成見込みについて、PDMで示された指標に従って記述すれば下表の様になる。

上位目標の達成見込み

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| <p>指標 1 プロジェクト終了後5年以内に、全DFEAが自ら立てたモニタリング計画に沿って大気の定期モニタリングが行えるようになる。</p> |
| <p>達成見込 本プロジェクトは、ホットスポットとされる3DFEA (DAM, Homs, and Aleppo)を大気モニタリングの対象として開始し、当初の目的は達成された。GCEAは暫定的ではあるが、ホットスポット地域に自動大気モニタリングシステムを導入する計画を持ち、かつ他11DFEAに対してもPM10やTSPなどの大気モニタリングラボを環境セクターの第10次5ヵ年計画(2006-2010)中に導入する計画である。以上から、プロジェクト終了後5年以内の上位目標達成は可能と見込まれる。</p> |
| <p>指標 2 国家環境モニタリングシステムの機能が全DFEAに適切に割り当てられる(照会機能)。</p> |
| <p>達成見込 GCEAと14 DFEAは国家環境モニタリングシステム上、他省庁との一般的な分担を伴った役割を与えられており、特にDFEAは汚染源に関する重要な役割を担っている。この役割を果たすべく、ラボ分析機能の強化が図られている。本プロジェクトによるモニタリング技術移転は、初歩的ではあるが順調に達成されつつある。しかし、シリア国における水質・大気的全項目について、より信頼度の高い分析を行うには更なるまた継続的な技術の向上が必要である。</p> |
| <p>指標 3 全14県においてモニタリングデータを取りまとめた年報が継続的に作成され、一般に公表される。</p> |
| <p>達成見込 水質、大気に関するモニタリングデータは全DFEAで蓄積されている。これらの公表にはデータの信頼性が条件となるため、今後ともラボに関する外部的あるいは内部的な品質保証/品質管理(QA/QC)向上努力が要求される。その後、将来的にはこれらのデータの公表が、年報あるいはデータブックの形で公表されることになるものと思われる。</p> |
| <p>指標 4 モニタリングデータが国レベルの年報として公表される。</p> |
| <p>達成見込 水質、大気に関するモニタリングデータは全DFEAで蓄積され、GCEAに送られる。GCEAは環境セクターの第10次5ヵ年計画(2006-2010)に準拠した環境現況把握、対策の効果検証、汚染管理に関する施策の促進のためにこれらのデータを解析する責任を担っている。シリア政府は、GCEAが準備した報告書を基に環境問題を議論していくことになる。政府の承認を経た後、将来的にはこれらのデータの公表が、年報あるいはデータブックの形で公表されることになるものと思われる。</p> |

プロジェクト目標の達成見込みについては、2007年7月に行われた終了時評価結果をベースとして2007年12月までの成果を入れてアップデートし、次表に示した。

プロジェクト目標の達成見込み

| | | | | |
|---|----------------------|--------|--------|---|
| プロジェクト目標 | | | | |
| 地方環境局が、自ら立てたモニタリング計画に従って水質、大気に関する対象項目選定と定期モニタリングの導入と実施が出来るようになり、そしてモニタリングデータの公表を含めた住民啓発活動への活用が出来るようになる。 | | | | |
| 指標 1 | | | | |
| 対象とする技術レベルは以下の通り: | | | | |
| - ダマスカス: (水質) 理化学分析レベル, (大気) 基礎サンプリングレベル (マニュアル) | | | | |
| - アレッポとホムス: (水質) 簡易分析レベル, (大気) 基礎サンプリングレベル (マニュアル) | | | | |
| - 他11DFEA: (水質) 簡易分析レベル, (大気) 本プロジェクトには含まれない | | | | |
| 結果 | | | | |
| 水質分析については、対象全14DFEAが殆ど目標を達成できたが、データの信頼性向上のための活動が望まれる。大気分析については、時間的制約から十分な反復トレーニングを行うことができず、検量線作成など一部不十分な所があったが、ほぼ目標達成のレベルまで到達した。詳細は以下の表に示した通りである。 | | | | |
| 各DFEAにおける分析技術レベル達成状況 | | | | |
| | DFEA | 分野 | 達成状況 | 備考 |
| a | Damascus | Water | Mostly | Knowledge acquired through the Project has been prepared in place of SOP's.: pH, temp, color, total dissolved solids (TDS), DO, total suspended solids (SS), COD, BOD, NO ₃ , PO ₄ , Cl, NH ₃ -N, electrical conductivity, and turbidity have been compiled. Compilation of SOP for Chemical and Biological Analysis (CB) has been completed. SOPs for Heavy Metal Analysis: Aluminum, Arsenic, Barium, Cadmium, Chromium, Nickel, Mercury, Iron, Antimony, Copper, Manganese, Zinc, Lead, and Silver have been compiled as well. |
| | | Air | Mostly | Knowledge acquired through the Project has been prepared in place of SOPs.: SO _x , NO _x , Pb, TSP, PM10, Ozone, Fluorine compound, NH ₃ , and Dust fall have been compiled. |
| b | Homs | Water | Mostly | Knowledge acquired through the Project has been prepared in place of SOP's.: pH, temp, color, total dissolved solids (TDS), DO, total suspended solids (SS), COD, BOD, NO ₃ , PO ₄ , Cl, NH ₃ -N, electrical conductivity, and turbidity have been compiled. |
| | | Air | Mostly | Knowledge acquired through the Project has been prepared in place of SOPs.: SO _x , NO _x , Pb, TSP, PM10, Ozone, Fluorine compound, NH ₃ , and Dust fall have been compiled. |
| | Aleppo | Water | Mostly | Knowledge acquired through the Project has been prepared in place of SOP's.: pH, temp, color, total dissolved solids (TDS), DO, total suspended solids (SS), COD, BOD, NO ₃ , PO ₄ , Cl, NH ₃ -N, electrical conductivity, and turbidity have been compiled. |
| | | Air | Mostly | Knowledge acquired through the Project has been prepared in place of SOPs.: SO _x , NO _x , Pb, TSP, PM10, Ozone, Fluorine compound, NH ₃ , and Dust fall have been compiled. |
| c | Damascus Countryside | Water | Mostly | Knowledge acquired through the Project has been prepared in place of SOP's.: pH, temp, color, total dissolved solids (TDS), DO, total suspended solids (SS), COD, BOD, NO ₃ , PO ₄ , Cl, NH ₃ -N, electrical conductivity, and turbidity have been compiled. Compilation of SOP for Chemical and Biological Analysis (CB) has been completed. |
| | Hama | Water | Mostly | Knowledge acquired through the Project has been prepared in place of SOP's.: pH, temp, color, total dissolved solids (TDS), DO, total suspended solids (SS), COD, BOD, NO ₃ , PO ₄ , Cl, NH ₃ -N, electrical conductivity, and turbidity have been compiled. |
| | Lattakia | Water | Mostly | Ditto |
| | Deir ez Zor | Water | Mostly | Ditto |
| | Idleb | Water | Mostly | Ditto |
| | Hasakeh | Water | Mostly | Ditto |
| | Rakka | Water | Mostly | Ditto |
| | Sweida | Water | Mostly | Ditto |
| | Dara'a | Water | Mostly | Ditto |
| | Tartous | Water | Mostly | Ditto |
| Quneitra | Water | Mostly | Ditto | |
| 指標 2 | | | | |
| 自ら立てたモニタリング計画に従って水質、大気の定期モニタリング実施が出来るようになる。 | | | | |

結果

プロジェクトを通じて自ら立てたモニタリング計画に従って水質、大気の定期モニタリング活動が実施されている。達成度が低いのは過度の計画目標設定とDFEA事務所の移転が理由である。大気質については当初計画していなかったが、トレーニング目的で分析したサンプルをカウントした。(Basic Water Quality: BW), Chemical and Biological Water Quality: CB, Heavy Metal: HM, Air Quality: AQ, Data Management: DM, Public Awareness: PA)

サンプル数に関する計画と実績の対比(2006年1月-12月)

| Directorates | 分野 | 計画サンプル数: =(a) | 実績サンプル数: =(b) | (b)/(a) (%) | 備考 | |
|--------------|----------------------|---------------|---------------|-------------|-----|---|
| 1 | Damascus | BW | 138 | 147 | 107 | |
| | | CB 1 | - | 7 | - | Sample for training |
| | | HM | - | - | - | |
| | | AQ | 0 | 29 | - | |
| 2 | Damascus Countryside | BW | 127 | 114 | 90 | |
| | | CB 2 | - | - | - | Sample for training |
| 3 | Aleppo | BW | 77 | 61 | 79 | Due to movement of DFEA office, sample for training |
| | | CB 2 | - | - | - | |
| | | AQ | 0 | 133 | - | |
| 4 | Homs | BW | 216 | 90 | 42 | |
| | | CB 2 | - | - | - | |
| | | AQ | 0 | 98 | - | Sample for training |
| 5 | Hama | BW | 185 | 81 | 44 | |
| 6 | Lattakia | BW | 198 | 114 | 58 | Over-estimation |
| 7 | Deir ez Zor | BW | 71 | 50 | 70 | |
| 8 | Idleb | BW | 55 | 50 | 91 | |
| 9 | Hasakeh | BW | 176 | 46 | 26 | Over-estimation |
| 10 | Rakka | BW | 38 | 40 | 105 | |
| 11 | Sweida | BW | 94 | 91 | 97 | |
| 12 | Dara'a | BW | 55 | 47 | 85 | |
| 13 | Tartous | BW | 42 | 54 | 129 | |
| 14 | Quneitra | BW | 36 | 41 | 114 | |
| Total | Water | 1,508 | 1,033 | 68 | | |
| | Air | 0 | 260 | - | | |

サンプル数に関する計画と実績の対比(2007年1月-12月)

| Directorates | 分野 | 計画サンプル数: =(a) | 実績サンプル数: =(b) | (b)/(a) (%) | 備考 | |
|--------------|----------------------|---------------|---------------|-------------|----------------------|---|
| 1 | Damascus | BW | 126 | 54 | 45 | Training for CBA |
| | | CB1 | - | 10 | - | Sample for training |
| | | HM | 98 | 37 | 38 | |
| | | AQ | 544 | 242 | 44 | |
| 2 | Damascus Countryside | BW | 170 | 224 | 132 | |
| | | CB 2 | - | 2 | - | Sample for training |
| 3 | Aleppo | BW | 36 | 23 | 64 | Due to movement of DFEA office, sample for training |
| | | CB 2 | - | 2 | - | |
| | | AQ | 444 | 140 | 32 | |
| 4 | Homs | BW | 42 | 120 | 286 | Inspection |
| | | CB 2 | - | 1 | - | Sample for training |
| | | AQ | 584 | 100 | 17 | |
| 5 | Hama | BW | 179 | 83 | 46 | |
| 6 | Lattakia | BW | 128 | 103 | 80 | |
| 7 | Deir ez Zor | BW | 77 | 31 | 40 | |
| 8 | Idleb | BW | 50 | 32 | 64 | |
| 9 | Hasakeh | BW | 69 | 65 | 94 | |
| 10 | Rakka | BW | 44 | 40 | 91 | |
| 11 | Sweida | BW | 74 | 73 | 99 | |
| 12 | Dara'a | BW | 51 | 53 | 104 | |
| 13 | Tartous | BW | 69 | 78 | 113 | |
| 14 | Quneitra | BW | 39 | 30 | 77 | |
| Total | Water | 1,252 | 1,061 | 85 | Mostly BW, HM and AQ | |
| | Air | 1,572 | 482 | 31 | | |

指標 3

14DFEAの内、少なくとも4DFEAにおいて住民啓発活動が行われる。

結果

4つの重点DFEAにおいて住民啓発活動が行われている。(成果5の5.2 と 5.3 参照)

指標 4

県レベルにおいて、モニタリングデータが年報の形で発行、公表される。

結果

全DFEAで2006年度の年報が作成された。2007年度については作成中である。しかし、これらの年報は、ラボ分析データが未公認であることを理由として一般に発行、公開されていない。

2.2 成果-1の達成状況

2004年9月9日付け実施協議議事録(R/D)のプロジェクト・デザイン・マトリックス(PDM)によると、成果-1の全体目標は「ラボスタッフのサンプリング及び分析能力の向上」である。成果-1の達成状況を以下に示す。

成果-1 の達成状況 (2007年12月現在)

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | |
|---|---|----------------------|-----------------------------|---|---------------------|-------------|-------------|
| | Directorates | Field | # of target lab staff = (a) | # of staff who can conduct according to SOP = (b) | Ratio of (b) to (a) | Remarks | |
| 1.1 全てのラボスタッフがSOPに従い、プロジェクト開始後3年以内に環境モニタリングを行えるようになる | 1 | Damascus | BW | 4 | 4 | 100.0 | |
| | | | CB 1 | 4 | 4 | 100.0 | |
| | | | HM | 5 | 5 | 100.0 | |
| | | | AQ | 3 | 3 | 100.0 | |
| | | | All | 16 | 16 | 100.0 | Water + Air |
| | 2 | Damascus Countryside | BW | 8 | 8 | 100.0 | |
| | | | CB 2 | 7 | 5 | 71.4 | |
| | | | All | 15 | 13 | 86.7 | BW+CB |
| | 3 | Aleppo | BW | 3 | 3 | 100.0 | |
| | | | CB 2 | 2 | 1 | 50.0 | |
| | | | AQ | 4 | 4 | 100.0 | |
| | | | All | 9 | 8 | 88.9 | Water + Air |
| | 4 | Homs | BW | 6 | 6 | 100.0 | |
| | | | CB 2 | 4 | 3 | 75.0 | |
| AQ | | | 6 | 6 | 100.0 | | |
| All | | | 16 | 15 | 93.8 | Water + Air | |
| 5 | Hama | BW | 6 | 6 | 100.0 | | |
| 6 | Lattakia | BW | 8 | 8 | 100.0 | | |
| 7 | Deir ez Zor | BW | 4 | 4 | 100.0 | | |
| 8 | Idleb | BW | 4 | 4 | 100.0 | | |
| 9 | Hasakeh | BW | 3 | 3 | 100.0 | | |
| 10 | Rakka | BW | 3 | 3 | 100.0 | | |
| 11 | Sweida | BW | 8 | 8 | 100.0 | | |
| 12 | Dara'a | BW | 5 | 5 | 100.0 | | |
| 13 | Tartous | BW | 6 | 6 | 100.0 | | |
| 14 | Quneitra | BW | 3 | 2 | 66.7 | | |
| Total | Water | | 93 | 88 | 94.6 | BW, CB, HM | |
| | Air | | 13 | 13 | 100 | | |
| | All | | 106 | 101 | 95.3 | | |

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | |
|--|--|---|-----------------------------|---|-------------------------|-------------|-------------|
| | 1.2 全スタッフがプロジェクト開始後3年以内にBレベルを達成する -Bレベル=データ分析は出来るが、評価や決定には指導者が必要である | 現在のBレベル達成度は90.6%である。これも、モニタリング実施のベースがほぼ達成されたことを示している。 Bレベルの能力を持つスタッフの数 | | | | | |
| | Directorates | Field | # of target lab staff = (a) | # of staff who have reached Grade B level = (b) | Ratio of (b) to (a) (%) | Remarks | |
| | 1 | Damascus | BW | 4 | 3 | 75.0 | |
| | | | CB 1 | 4 | 3 | 75.0 | |
| | | | HM | 5 | 5 | 100.0 | |
| | | | AQ | 3 | 3 | 100.0 | |
| | | All | 16 | 14 | 87.5 | Water + Air | |
| | 2 | Damascus Countryside | BW | 8 | 8 | 100.0 | |
| | | | CB 2 | 7 | 5 | 71.4 | |
| | | | All | 15 | 13 | 86.7 | BW+CB |
| | 3 | Aleppo | BW | 3 | 3 | 100.0 | |
| | | | CB 2 | 2 | 1 | 50.0 | |
| | | | AQ | 4 | 4 | 100.0 | |
| | | | All | 9 | 8 | 88.9 | Water + Air |
| | 4 | Homs | BW | 6 | 6 | 100.0 | |
| | | | CB 2 | 4 | 3 | 75.0 | |
| | | | AQ | 6 | 6 | 100.0 | |
| | | | All | 16 | 15 | 93.8 | Water + Air |
| | 5 | Hama | BW | 6 | 6 | 100.0 | |
| | 6 | Lattakia | BW | 8 | 8 | 100.0 | |
| | 7 | Deir ez Zor | BW | 4 | 4 | 100.0 | |
| | 8 | Idleb | BW | 4 | 4 | 100.0 | |
| | 9 | Hasakeh | BW | 3 | 3 | 100.0 | |
| | 10 | Rakka | BW | 3 | 3 | 100.0 | |
| | 11 | Sweida | BW | 8 | 7 | 87.5 | |
| | 12 | Dara'a | BW | 5 | 4 | 80.0 | |
| | 13 | Tartous | BW | 6 | 5 | 83.3 | |
| | 14 | Quneitra | BW | 3 | 2 | 66.7 | |
| | Total | Water | 93 | 83 | 89.2 | BW, CB, HM | |
| | | Air | 13 | 13 | 100.0 | | |
| | | All | 106 | 97 | 90.6 | | |
| 1.3 50%のスタッフがプロジェクト開始後3年以内にAレベルを達成する -Aレベル=データ分析、評価、決定も自ら判断できる | 現在のAレベルの達成度は20.8%と低く、その主な理由はBレベル達成C/Pがプロジェクトを離れたためである。しかし、22名のAレベルC/Pがプロジェクトで養成され、今後はこれらのC/Pが、他のラボスタッフや新人のトレーニングを実施していかなければならない。 Aレベルの能力を持つスタッフの数 | | | | | | |
| | Directorates | Field | # of target lab staff = (a) | # of staff who have reached Grade A level = (b) | Ratio of (b) to (a) (%) | Remarks | |
| | 1 | Damascus | BW | 4 | 1 | 25.0 | |
| | | | CB 1 | 4 | 0 | 0.0 | |
| | | | HM | 5 | 1 | 20.0 | |
| | | | AQ | 3 | 0 | 0.0 | |
| | | | All | 16 | 2 | 12.5 | Water + Air |
| | 2 | Damascus Countryside | BW | 8 | 2 | 25.0 | |
| | | | CB 2 | 7 | 0 | 0.0 | |
| | | | All | 15 | 2 | 13.3 | BW+CB |
| | 3 | Aleppo | BW | 3 | 1 | 33.3 | |
| | | | CB 2 | 2 | 0 | 0.0 | |
| | | | AQ | 4 | 1 | 25.0 | |
| | | | All | 9 | 2 | 22.2 | Water + Air |
| | 4 | Homs | BW | 6 | 2 | 33.3 | |
| | | | CB 2 | 4 | 0 | 0.0 | |
| | | | AQ | 6 | 2 | 33.3 | |
| | | | All | 16 | 4 | 25.0 | Water + Air |
| | 5 | Hama | BW | 6 | 2 | 33.3 | |
| | 6 | Lattakia | BW | 8 | 1 | 12.5 | |
| | 7 | Deir ez Zor | BW | 4 | 2 | 50.0 | |
| | 8 | Idleb | BW | 4 | 1 | 25.0 | |
| | 9 | Hasakeh | BW | 3 | 1 | 33.3 | |
| | 10 | Rakka | BW | 3 | 0 | 0.0 | |

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | |
|----|---|----------|--------|-----|----|------|------------|
| | | 11 | Sweida | BW | 8 | 2 | 25.0 |
| | 12 | Dara'a | BW | 5 | 1 | 20.0 | |
| | 13 | Tartous | BW | 6 | 1 | 16.7 | |
| | 14 | Quneitra | BW | 3 | 1 | 33.3 | |
| | Total | Water | | 93 | 19 | 20.4 | BW, CB, HM |
| | | Air | | 13 | 3 | 23.1 | |
| | | All | | 106 | 22 | 20.8 | |

2.3 成果-2の達成状況

2004年9月9日付け実施協議議事録(R/D)のプロジェクト・デザイン・マトリックス(PDM)によると、成果-2の全体目標は「ラボがスタッフにより適切に管理される」である。成果-2の達成状況を以下に示す。

成果-2 の達成状況(2007年12月現在)

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | |
|---------------------|---|---|-----------------------------|--|-------------------------|-------------|
| | 2.1 プロジェクト開始後3年以内に、O/Mマニュアルに従って分析機器のO/Mができるようになる | O/Mマニュアルは2005年にJETによってドラフトされた。C/Pはラボ特性を勘案しながら、実務を通じてこれを改訂してきた。現在、84.0%のDFEAのラボスタッフがO/Mマニュアルに沿って機材の維持管理ができるようになった。 | | | | |
| 分析機器のO/M能力を持つスタッフの数 | | | | | | |
| | Directorates | Field | # of target lab staff = (a) | # of staff who can O/M equip. in lab according to the manual = (b) | Ratio of (b) to (a) (%) | Remarks |
| 1 | Damascus | BW | 4 | 3 | 75.0 | |
| | | CB 1 | 4 | 3 | 75.0 | |
| | | HM | 5 | 5 | 100.0 | |
| | | AQ | 3 | 3 | 100.0 | |
| | All | | 16 | 14 | 87.5 | Water + Air |
| 2 | Damascus Countryside | BW | 8 | 8 | 100.0 | |
| | | CB 2 | 7 | 2 | 28.6 | |
| | | All | 15 | 10 | 66.7 | BW+CB |
| 3 | Aleppo | BW | 3 | 2 | 66.7 | |
| | | CB 2 | 2 | 1 | 50.0 | |
| | | AQ | 4 | 4 | 100.0 | |
| | | All | 9 | 7 | 77.8 | Water + Air |
| 4 | Homs | BW | 6 | 6 | 100.0 | |
| | | CB 2 | 4 | 3 | 75.0 | |
| | | AQ | 6 | 6 | 100.0 | |
| | | All | 16 | 15 | 93.8 | Water + Air |
| 5 | Hama | BW | 6 | 6 | 100.0 | |
| 6 | Lattakia | BW | 8 | 8 | 100.0 | |
| 7 | Deir ez Zor | BW | 4 | 4 | 100.0 | |
| 8 | Idleb | BW | 4 | 4 | 100.0 | |
| 9 | Hasakeh | BW | 3 | 3 | 100.0 | |
| 10 | Rakka | BW | 3 | 3 | 100.0 | |
| 11 | Sweida | BW | 8 | 7 | 87.5 | |
| 12 | Dara'a | BW | 5 | 5 | 100.0 | |
| 13 | Tartous | BW | 6 | 2 | 33.3 | |
| 14 | Quneitra | BW | 3 | 1 | 33.3 | |
| | Total | Water | 93 | 76 | 81.7 | BW, CB, HM |
| | | Air | 13 | 13 | 100.0 | |
| | | All | 106 | 89 | 84.0 | |

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------------------------------|---|------------------------------------|---|---|----------|-----------|---|---|----------------------|-------|-----------|---|--------|-------|--|---|------|-------|-----------|---|------|-------|---------------------|---|----------|-------|-----------|---|-------------|-------|-----------|---|-------|-------|---------------------|---|---------|-------|-----------|----|-------|-------|---------------|----|--------|-------|---------------------|----|--------|-------|-----------|----|---------|-------|-----------|----|----------|-------|-----------|
| 2.2. プロジェクト開始後3年以内に、スペアパーツや備品の管理システムがO/M構築される | <p>2006年6月に全DFEAがスペアパーツや薬品など備品管理のためのO/Mシートを作成し、ラボチーフとラボスタッフによって管理と更新が図られてきた。下表に示すように、O/Mシートの適切な更新が行われている。</p> <p style="text-align: center;">スペアパーツや備品の管理システム構築状況</p> <table border="1" data-bbox="555 421 1222 958"> <thead> <tr> <th colspan="2">Directorates</th> <th>Timing of preparation of O/M sheet</th> <th>Updating of record on occasion</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Damascus</td> <td>June 2006</td> <td>July 2006(oil meter) May 2007(low volume air sampler) July 2007(EC meter)</td> </tr> <tr> <td>2</td> <td>Damascus Countryside</td> <td>ditto</td> <td></td> </tr> <tr> <td>3</td> <td>Aleppo</td> <td>ditto</td> <td></td> </tr> <tr> <td>4</td> <td>Homs</td> <td>ditto</td> <td></td> </tr> <tr> <td>5</td> <td>Hama</td> <td>ditto</td> <td>July 2007(pH meter)</td> </tr> <tr> <td>6</td> <td>Lattakia</td> <td>ditto</td> <td></td> </tr> <tr> <td>7</td> <td>Deir ez Zor</td> <td>ditto</td> <td></td> </tr> <tr> <td>8</td> <td>Idleb</td> <td>ditto</td> <td>Jan 2006(COD meter)</td> </tr> <tr> <td>9</td> <td>Hasakeh</td> <td>ditto</td> <td></td> </tr> <tr> <td>10</td> <td>Rakka</td> <td>ditto</td> <td></td> </tr> <tr> <td>11</td> <td>Sweida</td> <td>ditto</td> <td>July 2007(EC meter)</td> </tr> <tr> <td>12</td> <td>Dara'a</td> <td>ditto</td> <td></td> </tr> <tr> <td>13</td> <td>Tartous</td> <td>ditto</td> <td></td> </tr> <tr> <td>14</td> <td>Quneitra</td> <td>ditto</td> <td></td> </tr> </tbody> </table> | Directorates | | Timing of preparation of O/M sheet | Updating of record on occasion | 1 | Damascus | June 2006 | July 2006(oil meter) May 2007(low volume air sampler) July 2007(EC meter) | 2 | Damascus Countryside | ditto | | 3 | Aleppo | ditto | | 4 | Homs | ditto | | 5 | Hama | ditto | July 2007(pH meter) | 6 | Lattakia | ditto | | 7 | Deir ez Zor | ditto | | 8 | Idleb | ditto | Jan 2006(COD meter) | 9 | Hasakeh | ditto | | 10 | Rakka | ditto | | 11 | Sweida | ditto | July 2007(EC meter) | 12 | Dara'a | ditto | | 13 | Tartous | ditto | | 14 | Quneitra | ditto | |
| Directorates | | Timing of preparation of O/M sheet | Updating of record on occasion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Damascus | June 2006 | July 2006(oil meter) May 2007(low volume air sampler) July 2007(EC meter) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Damascus Countryside | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Aleppo | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Homs | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Hama | ditto | July 2007(pH meter) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Lattakia | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Deir ez Zor | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Idleb | ditto | Jan 2006(COD meter) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hasakeh | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Rakka | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Sweida | ditto | July 2007(EC meter) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Dara'a | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Tartous | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Quneitra | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3 プロジェクト開始後3年以内にO/Mマニュアルに従って試薬や薬品の管理が行われる | <p>試薬と薬品については、O/Mシートを四半期に一度更新する計画である。殆どのDFEAは計画通り更新しており、管理が適切に行われている。しかしながら、2DFEAだけスタッフ不足のため、更新できずにいる。また、一部のDFEAで冷所保存がなされていないなどの問題が散見されたため、DFEA局長へエアコン(AC)設置などの改善をアドバイスし、局長も早急な是正を約束した。</p> <p style="text-align: center;">試薬と薬品の管理状況</p> <table border="1" data-bbox="491 1155 1286 1653"> <thead> <tr> <th></th> <th>Directorates</th> <th>Timing of preparation of O/M sheet</th> <th>Frequency of updating of O/M sheet (one time/ 3 months)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Damascus</td> <td>June 2006</td> <td>Continued</td> </tr> <tr> <td>2</td> <td>Damascus Countryside</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>3</td> <td>Aleppo</td> <td>ditto</td> <td>Not continued (due to serious shortage of staff)</td> </tr> <tr> <td>4</td> <td>Homs</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>5</td> <td>Hama</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>6</td> <td>Lattakia</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>7</td> <td>Deir ez Zor</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>8</td> <td>Idleb</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>9</td> <td>Hasakeh</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>10</td> <td>Rakka</td> <td>ditto</td> <td>Not continued</td> </tr> <tr> <td>11</td> <td>Sweida</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>12</td> <td>Dara'a</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>13</td> <td>Tartous</td> <td>ditto</td> <td>Continued</td> </tr> <tr> <td>14</td> <td>Quneitra</td> <td>ditto</td> <td>Continued</td> </tr> </tbody> </table> | | Directorates | Timing of preparation of O/M sheet | Frequency of updating of O/M sheet (one time/ 3 months) | 1 | Damascus | June 2006 | Continued | 2 | Damascus Countryside | ditto | Continued | 3 | Aleppo | ditto | Not continued (due to serious shortage of staff) | 4 | Homs | ditto | Continued | 5 | Hama | ditto | Continued | 6 | Lattakia | ditto | Continued | 7 | Deir ez Zor | ditto | Continued | 8 | Idleb | ditto | Continued | 9 | Hasakeh | ditto | Continued | 10 | Rakka | ditto | Not continued | 11 | Sweida | ditto | Continued | 12 | Dara'a | ditto | Continued | 13 | Tartous | ditto | Continued | 14 | Quneitra | ditto | Continued |
| | Directorates | Timing of preparation of O/M sheet | Frequency of updating of O/M sheet (one time/ 3 months) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Damascus | June 2006 | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Damascus Countryside | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Aleppo | ditto | Not continued (due to serious shortage of staff) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Homs | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Hama | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Lattakia | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Deir ez Zor | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Idleb | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hasakeh | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Rakka | ditto | Not continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Sweida | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Dara'a | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Tartous | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Quneitra | ditto | Continued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-----------------|-----------------------|---|--|-----------------|-----------------------|---|----------|-----|--|---|----------------------|-----|-------------------|---|--------|-----|---------------------|---|------|-----|--------------------|---|------|-----|--|---|----------|-----|--|---|-------------|-----|--|---|-------|-----|---------------------|---|---------|-----|--|----|-------|-----|--|----|--------|-----|---------------------|----|--------|-----|--|----|---------|-----|---------------------|----|----------|-----|---------------------|
| <p>2.4. プロジェクト開始後3年以内に、O/Mマニュアルに従ってラボからの廃水や廃棄物が適切に処理される</p> | <p>ラボ廃水処理は前提条件となっていたが、今なお満たされていない。</p> <p>JICA専門家チームの提案に基づいて、GCEAはダマスカス DFEAに排水処理施設を購入し、他DFEAからのラボ廃水も処理しようとした。しかしながら、導入した処理施設の処理ユニットシステムの不具合など技術的トラブルが発生し、納入業者も改善が出来ず今なお稼動していない。他DFEAは取り合えずポリタンクへ廃水を貯蔵し、一部のDFEAは既に廃水をDAM DFEAへ運び込んでいる。</p> <p>GCEAは技術委員会を組織したものの、自らの指導能力欠如によって2007年12月現在、未だ改善されていない。専門家チームは、処理ユニットシステムの不具合に対して技術的観点からの処理施設改善点を2007年8月に技術委員会へ提出し、更なる改善努力を求めた。</p> <p style="text-align: center;">ラボ廃水保管状況</p> <table border="1" data-bbox="513 607 1259 1048"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Directorates</th> <th colspan="2">Frequency of sending lab wastewater to DAM DFEA</th> </tr> <tr> <th>Storing in tank</th> <th>Sending record to DAM</th> </tr> </thead> <tbody> <tr><td>1</td><td>Damascus</td><td>Yes</td><td></td></tr> <tr><td>2</td><td>Damascus Countryside</td><td>Yes</td><td>17 Feb 2007 (80L)</td></tr> <tr><td>3</td><td>Aleppo</td><td>Yes</td><td>19 April 2007 (80L)</td></tr> <tr><td>4</td><td>Homs</td><td>Yes</td><td>21 June 2007 (80L)</td></tr> <tr><td>5</td><td>Hama</td><td>Yes</td><td></td></tr> <tr><td>6</td><td>Lattakia</td><td>Yes</td><td></td></tr> <tr><td>7</td><td>Deir ez Zor</td><td>Yes</td><td></td></tr> <tr><td>8</td><td>Idleb</td><td>Yes</td><td>22 April 2007 (80L)</td></tr> <tr><td>9</td><td>Hasakeh</td><td>Yes</td><td></td></tr> <tr><td>10</td><td>Rakka</td><td>Yes</td><td></td></tr> <tr><td>11</td><td>Sweida</td><td>Yes</td><td>23 April 2007 (80L)</td></tr> <tr><td>12</td><td>Dara'a</td><td>Yes</td><td></td></tr> <tr><td>13</td><td>Tartous</td><td>Yes</td><td>25 April 2007 (80L)</td></tr> <tr><td>14</td><td>Quneitra</td><td>Yes</td><td>23 April 2007 (80L)</td></tr> </tbody> </table> | | Directorates | Frequency of sending lab wastewater to DAM DFEA | | Storing in tank | Sending record to DAM | 1 | Damascus | Yes | | 2 | Damascus Countryside | Yes | 17 Feb 2007 (80L) | 3 | Aleppo | Yes | 19 April 2007 (80L) | 4 | Homs | Yes | 21 June 2007 (80L) | 5 | Hama | Yes | | 6 | Lattakia | Yes | | 7 | Deir ez Zor | Yes | | 8 | Idleb | Yes | 22 April 2007 (80L) | 9 | Hasakeh | Yes | | 10 | Rakka | Yes | | 11 | Sweida | Yes | 23 April 2007 (80L) | 12 | Dara'a | Yes | | 13 | Tartous | Yes | 25 April 2007 (80L) | 14 | Quneitra | Yes | 23 April 2007 (80L) |
| | Directorates | | | Frequency of sending lab wastewater to DAM DFEA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Storing in tank | Sending record to DAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Damascus | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Damascus Countryside | Yes | 17 Feb 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Aleppo | Yes | 19 April 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Homs | Yes | 21 June 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Hama | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Lattakia | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Deir ez Zor | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Idleb | Yes | 22 April 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hasakeh | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Rakka | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Sweida | Yes | 23 April 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Dara'a | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Tartous | Yes | 25 April 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Quneitra | Yes | 23 April 2007 (80L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>2.5 各DFEAがモニタリングのための予算計画を立てる</p> | <p>定期モニタリングに必要な予算計画を、各DFEAは2005 と 2006に立てた(第3.7章と第5.2章参照)。2008年度分については、2007年の8月に予算計画が立てられ、MOLAEに要求がなされた。2008年度予算は、2008年の1月に配布される予定である。</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2.4 成果-3の達成状況

2004年9月9日付け実施協議議事録(R/D)のプロジェクト・デザイン・マトリックス(PDM)によると、成果 - 3の全体目標は「環境分析データが蓄積され且つ適切に管理される」である。成果-3の達成状況を以下に示す。

成果-3 の達成状況(2007年12月現在)

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | |
|---|---|----------------------|-------------------------------|--------------------|-----------------------------|---------|------------------------|
| | 蓄積、入力されたデータ数 | | | | | | |
| | Directorates | Field | # of data (samples) collected | # of data analyzed | # of data accumulated in DB | Remarks | |
| 3.1. プロジェクト開始後3年以内にモニタリングデータが収集され、解析される | 1 | Damascus | BW | 201 | 6,930 | 2,324 | Jan. 2006 to Nov. 2007 |
| | | | CB 1 | 10 | 40 | 0 | Samples for training |
| | | | HM | 36 | 442 | 0 | |
| | | | AQ | 242 | 242 | 154 | |
| | | | All | 389 | 6,712 | 2,478 | |
| | 2 | Damascus Countryside | BW | 338 | 7,924 | 3,570 | |
| | | | CB 2 | 2 | 8 | 0 | Samples for training |
| | | | All | 340 | 7,932 | 3,570 | |
| | 3 | Aleppo | BW | 84 | 2,884 | 854 | |
| | | | CB 2 | 2 | 8 | 0 | Samples for training |
| | | | AQ | 115 | 115 | 92 | |
| | | | All | 226 | 3,032 | 946 | |
| | 4 | Homs | BW | 210 | 5,460 | 1,792 | |
| | | | CB 2 | 1 | 4 | 0 | Samples for training |
| | | | AQA | 100 | 100 | 80 | |
| | | | All | 311 | 5,564 | 1,872 | |
| | 5 | Hama | BW | 164 | 4,564 | 1,736 | |
| | 6 | Lattakia | BW | 217 | 6,230 | 2,506 | |
| | 7 | Deir ez Zor | BW | 81 | 2,534 | 868 | |
| | 8 | Idleb | BW | 82 | 2,548 | 938 | |
| | 9 | Hasakeh | BW | 111 | 2,842 | 994 | |
| | 10 | Rakka | BW | 80 | 2,240 | 560 | |
| | 11 | Sweida | BW | 164 | 4,844 | 1,750 | |
| | 12 | Dara'a | BW | 100 | 2,716 | 1,050 | |
| | 13 | Tartous | BW | 132 | 3,360 | 1,246 | |
| | 14 | Quneitra | BW | 72 | 2,142 | 742 | |
| | Total | | Water | 2,086 | 57,720 | 20,930 | Mostly BW and HM |
| | | | Air | 482 | 482 | 326 | |
| All | | | 2,568 | 58,202 | 21,256 | | |

2.5 成果-4の達成状況

2004年9月9日付け実施協議議事録(R/D)のプロジェクト・デザイン・マトリックス(PDM)によると、成果-4の全体目標は「ラボラトリスタッフが特定の分析パラメータにつき、環境モニタリング計画を立案出来る」である。成果-4の達成状況を以下に示す。

成果-4 の達成状況(2007年12月現在)

| 指標 | 達成状況 (BW: 簡易分析, CB: 理化学分析, HM: 重金属, AQ: 大気質) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---------------|---------|--|--|--------------|-------|---------------|---------------|---------|---|----------|-------|---|---|--|-----|---|---|-------------------------------|---|----------------------|-------|---|---|---|-----|---|---|-------------------------------|---|--------|-------|---|---|---|-----|---|---|-------------------------------|---|------|-------|---|---|---|-----|---|---|-------------------------------|---|------|-------|---|---|----|---|----------|-------|---|---|----|---|-------------|-------|---|---|----|---|-------|-------|---|---|----|---|---------|-------|---|---|----|----|-------|-------|---|---|----|----|--------|-------|---|---|----|----|--------|-------|---|---|----|----|---------|-------|---|---|----|----|----------|-------|---|---|
| | 4.1. プロジェクト開始後1年以内に指標と地点を特定した環境モニタリング計画を策定する | <p>簡易分析と大気質分析に関しては、2006年と2007年にモニタリング計画を策定した。2008年度分については、理化学分析、重金属分析も含め2007年12月を目処に策定され、2008年の1月にとりまとめてGCEAへ提出される予定である。</p> <p style="text-align: center;">モニタリング計画策定状況 (0=策定済 X=未策定)</p> <table border="1"> <thead> <tr> <th>Directorates</th> <th>Field</th> <th>Plan for 2006</th> <th>Plan for 2007</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td rowspan="2">1</td> <td rowspan="2">Damascus</td> <td>Water</td> <td>O</td> <td>O</td> <td>-BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 -HM: One-year plan prepared in August 2007.</td> </tr> <tr> <td>Air</td> <td>O</td> <td>O</td> <td>-Plan for 2008 to be prepared</td> </tr> <tr> <td rowspan="2">2</td> <td rowspan="2">Damascus Countryside</td> <td>Water</td> <td>O</td> <td>O</td> <td>-BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008</td> </tr> <tr> <td>Air</td> <td>O</td> <td>O</td> <td>-Plan for 2008 to be prepared</td> </tr> <tr> <td rowspan="2">3</td> <td rowspan="2">Aleppo</td> <td>Water</td> <td>O</td> <td>O</td> <td>-BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008</td> </tr> <tr> <td>Air</td> <td>O</td> <td>O</td> <td>-Plan for 2008 to be prepared</td> </tr> <tr> <td rowspan="2">4</td> <td rowspan="2">Homs</td> <td>Water</td> <td>O</td> <td>O</td> <td>-BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008</td> </tr> <tr> <td>Air</td> <td>O</td> <td>O</td> <td>-Plan for 2008 to be prepared</td> </tr> <tr> <td>5</td> <td>Hama</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>6</td> <td>Lattakia</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>7</td> <td>Deir ez Zor</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>8</td> <td>Idleb</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>9</td> <td>Hasakeh</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>10</td> <td>Rakka</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>11</td> <td>Sweida</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>12</td> <td>Dara'a</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>13</td> <td>Tartous</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> <tr> <td>14</td> <td>Quneitra</td> <td>Water</td> <td>O</td> <td>O</td> <td>BW</td> </tr> </tbody> </table> | | | | | Directorates | Field | Plan for 2006 | Plan for 2007 | Remarks | 1 | Damascus | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 -HM: One-year plan prepared in August 2007. | Air | O | O | -Plan for 2008 to be prepared | 2 | Damascus Countryside | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 | Air | O | O | -Plan for 2008 to be prepared | 3 | Aleppo | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 | Air | O | O | -Plan for 2008 to be prepared | 4 | Homs | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 | Air | O | O | -Plan for 2008 to be prepared | 5 | Hama | Water | O | O | BW | 6 | Lattakia | Water | O | O | BW | 7 | Deir ez Zor | Water | O | O | BW | 8 | Idleb | Water | O | O | BW | 9 | Hasakeh | Water | O | O | BW | 10 | Rakka | Water | O | O | BW | 11 | Sweida | Water | O | O | BW | 12 | Dara'a | Water | O | O | BW | 13 | Tartous | Water | O | O | BW | 14 | Quneitra | Water | O | O |
| Directorates | Field | Plan for 2006 | Plan for 2007 | Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | Air | O | O | -Plan for 2008 to be prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Damascus Countryside | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Air | O | O | -Plan for 2008 to be prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Aleppo | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Air | O | O | -Plan for 2008 to be prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Homs | Water | O | O | -BW : Plans for 2006 and 2007 prepared -CB: Expected to be included in the plan for 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Air | O | O | -Plan for 2008 to be prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Hama | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Lattakia | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Deir ez Zor | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Idleb | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hasakeh | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Rakka | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Sweida | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Dara'a | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Tartous | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Quneitra | Water | O | O | BW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.2 プロジェクト開始後3年以内に、標準化した環境モニタリングガイドラインが各DFEAに導入される | <p>JICA専門家チームはGCEAと協議して、環境モニタリングガイドライン策定のための手順書を準備した。GCEAは2007年8月に、これを公式レターに添付して全DFEAへ送付し、年間モニタリング計画作成の経験を活かしたガイドライン作成を指示した。</p> <p>作成されたガイドラインは一旦GCEAへ集められ、承認後2007年11月にJICA専門家チームへ手渡された。これらのドラフトを基に、JICA専門家チームは各DFEAに対して改善点に関するコメントと提案を行った。今後、DFEAは自らの環境モニタリングの目的や環境特性を勘案しながらこのガイドラインを毎年改訂し、アップグレードしていかなくてはならない。</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2.6 成果-5の達成状況

2004年9月9日付け実施協議議事録(R/D)のプロジェクト・デザイン・マトリックス(PDM)によると、成果-5の全体目標は「プロジェクトにより得られた結果とデータが対象県民に公表・共有される。対象県のラボスタッフが住民啓発及び環境教育の活動計画を立案出来る」である。成果-5の達成状況を以下に示す。

成果-5 の達成状況(2007年12月現在)

| 指標 | 達成状況 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|---|-----|----------|-------|--|---|---|--|-------|---|--|--|---|------|------|-------|-------|--|--------------|-----------|-------|--------|----------|----------|---------------------------|--|--|---|-------|-------|-------|-------|-------|--------|---------|-------|-------|----|----------|-------|-------|-------|--------|------|---------|----------|----------|---|-------|----|---------|------|-------|----|----------|---|-------|-------|--|---|--|
| 5.1 住民啓発に関する意識調査を行い、結果を共有する | <p>環境意識調査は2004年と2005年に、人口が多くかつ地域の代表性を考慮して選定した7県を対象として行われた(Damascus, Damascus Countryside, Aleppo, Homs, Hasakeh, Sweida, and Tartous)。調査は再委託で行われ、環境教育担当C/Pも参加した。主な調査結果は以下の通りである。</p> <ul style="list-style-type: none"> -調査対象者の70%が環境汚染の存在を認識し、20%が悪化していると回答した。 -調査対象者の大半が環境情報をTV、ラジオ、新聞から得ていた。 -近隣環境に対する苦情を持っている調査対象者は約10%であった。 -調査対象者の60%以上は、DFEAや県の苦情受付制度を知らなかった。 -しかし、苦情を持っている調査対象者の60%は苦情受付制度を知っていた。 <p>C/Pにとって、上記の事実を定量的に認識するのは初めてであり、このような調査が住民啓発に関する活動計画立案や有効性のレビューに有益であることを認識した。JICA専門家チームは手法と結果について2006年2月の国家情報環境啓発委員会会合においてプレゼンし、参加者に共有された。</p> <p style="text-align: center;">環境意識調査実施状況 (○=実施済 X=未実施)</p> <table border="1"> <thead> <tr> <th>Governorate</th> <th>Survey</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Damascus</td> <td>○2004</td> <td>Actual content is trained in the 1st integrated training for environmental management held in DAM.</td> </tr> <tr> <td>2</td> <td>Damascus Countryside</td> <td>○2004</td> <td>ditto</td> </tr> <tr> <td>3</td> <td>Aleppo</td> <td>○2004</td> <td>ditto</td> </tr> <tr> <td>4</td> <td>Homs</td> <td>○2005</td> <td>ditto</td> </tr> <tr> <td>5</td> <td>Hama</td> <td>X</td> <td>ditto</td> </tr> <tr> <td>6</td> <td>Lattakia</td> <td>X</td> <td>ditto</td> </tr> <tr> <td>7</td> <td>Deir ez Zor</td> <td>X</td> <td>ditto</td> </tr> <tr> <td>8</td> <td>Idleb</td> <td>X</td> <td>ditto</td> </tr> <tr> <td>9</td> <td>Hasakeh</td> <td>2005</td> <td>ditto</td> </tr> <tr> <td>10</td> <td>Rakka</td> <td>X</td> <td>ditto</td> </tr> <tr> <td>11</td> <td>Sweida</td> <td>2005</td> <td>ditto</td> </tr> <tr> <td>12</td> <td>Dara'a</td> <td>X</td> <td>ditto</td> </tr> <tr> <td>13</td> <td>Tartous</td> <td>2005</td> <td>ditto</td> </tr> <tr> <td>14</td> <td>Quneitra</td> <td>X</td> <td>ditto</td> </tr> <tr> <td colspan="2">Total</td> <td>7</td> <td></td> </tr> </tbody> </table> | Governorate | Survey | Remarks | 1 | Damascus | ○2004 | Actual content is trained in the 1 st integrated training for environmental management held in DAM. | 2 | Damascus Countryside | ○2004 | ditto | 3 | Aleppo | ○2004 | ditto | 4 | Homs | ○2005 | ditto | 5 | Hama | X | ditto | 6 | Lattakia | X | ditto | 7 | Deir ez Zor | X | ditto | 8 | Idleb | X | ditto | 9 | Hasakeh | 2005 | ditto | 10 | Rakka | X | ditto | 11 | Sweida | 2005 | ditto | 12 | Dara'a | X | ditto | 13 | Tartous | 2005 | ditto | 14 | Quneitra | X | ditto | Total | | 7 | |
| Governorate | Survey | Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Damascus | ○2004 | Actual content is trained in the 1 st integrated training for environmental management held in DAM. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Damascus Countryside | ○2004 | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Aleppo | ○2004 | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Homs | ○2005 | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Hama | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Lattakia | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Deir ez Zor | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Idleb | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hasakeh | 2005 | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Rakka | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Sweida | 2005 | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Dara'a | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Tartous | 2005 | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Quneitra | X | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.2 住民啓発に使用するテキスト、マニュアル、パンフレットなどの教材が作成される | <p>住民啓発に使用するテキスト、マニュアルなどの教材がGCEAならびに優先4県のDFEAを中心に作成された。</p> <p style="text-align: center;">GCEAにおいて作成された教材 (2005~2006)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Textbooks</th> <th>Manuals</th> <th>C/D</th> <th>others</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>-Eco-plant game (300 sets) -Its instruction manual</td> <td>-</td> <td>-Video program "Japan Experience on Pollution Control" (2,000 sets)</td> <td>-Humat Beia Newsletter No.1 (3,000 sets) -Humat Beia Newsletter No.2 (3,000 sets)</td> </tr> <tr> <td>2006</td> <td>-</td> <td>-Environmental Works Manual (2,000 sets)</td> <td>-Water treatment Technology in Japan (300 sets) -The History of Pollution and Environmental Restoration in Yokkaichi (300 sets)</td> <td>-Humat Beia Newsletter No.3 (1,500 sets) - Humat Beia Newsletter No.4 (2,000 sets) -Humat Beia Newsletter No.5 special issue for study tour to Egypt (200 sets)</td> </tr> <tr> <td>2007</td> <td>-</td> <td>-</td> <td>-</td> <td>-Humat Beia Newsletter No.6 (1,500 sets)</td> </tr> </tbody> </table> <p style="text-align: center;">優先4県において作成された教材(2007年1月から)</p> <table border="1"> <thead> <tr> <th>Directorates</th> <th>Textbooks</th> <th>C/D</th> <th>others</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Damascus</td> <td>-Eco-plant game (20 sets)</td> <td>- CDs mentioned in the table above (50 sets)</td> <td>-Presentation materials for WS and seminar -Humat Beia Newsletter</td> </tr> <tr> <td>2</td> <td>Homs</td> <td>ditto</td> <td>ditto</td> <td>ditto</td> </tr> <tr> <td>3</td> <td>Aleppo</td> <td>ditto</td> <td>ditto</td> <td>ditto</td> </tr> <tr> <td>4</td> <td>Lattakia</td> <td>ditto</td> <td>ditto</td> <td>ditto</td> </tr> <tr> <td colspan="2">Total</td> <td>80 sets</td> <td>200 sets</td> <td>800 sets</td> </tr> </tbody> </table> | Year | Textbooks | Manuals | C/D | others | 2005 | -Eco-plant game (300 sets) -Its instruction manual | - | -Video program "Japan Experience on Pollution Control" (2,000 sets) | -Humat Beia Newsletter No.1 (3,000 sets) -Humat Beia Newsletter No.2 (3,000 sets) | 2006 | - | -Environmental Works Manual (2,000 sets) | -Water treatment Technology in Japan (300 sets) -The History of Pollution and Environmental Restoration in Yokkaichi (300 sets) | -Humat Beia Newsletter No.3 (1,500 sets) - Humat Beia Newsletter No.4 (2,000 sets) -Humat Beia Newsletter No.5 special issue for study tour to Egypt (200 sets) | 2007 | - | - | - | -Humat Beia Newsletter No.6 (1,500 sets) | Directorates | Textbooks | C/D | others | 1 | Damascus | -Eco-plant game (20 sets) | - CDs mentioned in the table above (50 sets) | -Presentation materials for WS and seminar -Humat Beia Newsletter | 2 | Homs | ditto | ditto | ditto | 3 | Aleppo | ditto | ditto | ditto | 4 | Lattakia | ditto | ditto | ditto | Total | | 80 sets | 200 sets | 800 sets | | | | | | | | | | | | | | |
| Year | Textbooks | Manuals | C/D | others | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2005 | -Eco-plant game (300 sets) -Its instruction manual | - | -Video program "Japan Experience on Pollution Control" (2,000 sets) | -Humat Beia Newsletter No.1 (3,000 sets) -Humat Beia Newsletter No.2 (3,000 sets) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2007 | - | - | - | -Humat Beia Newsletter No.6 (1,500 sets) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Directorates | Textbooks | C/D | others | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2 | Homs | ditto | ditto | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Aleppo | ditto | ditto | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Lattakia | ditto | ditto | ditto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | | 80 sets | 200 sets | 800 sets | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 指標 | 達成状況 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-------------------|--|-------------------|------------------------------------|---|----------|--|---------|------------------------|---|-----------|---|---|------------------------|---|------------|--|----|---|--|------|--------------------------|-------------------|------------------------------------|---|----------|--|----|---|---|-----------|---|---|--------------------|--|------|--------------------------|-------------------|------------------------------------|---|----------|--|---------|---|---|-----------|---|---|----------------------|---|-----------|--|----|---|--|------|--------------------------|-------------------|-------------------------------------|---|----------|--|---|------------------------|---|-----------|---|---|-------------|---|-----------|---|----|------------------------|---|-----------|--|----|---|--|------|--------------------------|-------------------|------------------------------------|---|-----------|---------------------------------|----|--|---|-----------|--|----|--------------------------------------|---|-----------|---|----|---------------------------------|---|----------|--|---|---------------|
| 5.3 環境教育関連の機関を対象としたセミナーやワークショップが開催される | <p>合計12回のワークショップが優先4県のDFEAで行われた。</p> <p style="text-align: center;">Damascus DFEA</p> <table border="1" data-bbox="491 342 1305 544"> <thead> <tr> <th></th> <th>Year</th> <th>Type of workshop/seminar</th> <th># of participants</th> <th>Type of institutions/organizations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>May 2006</td> <td>Workshop for demonstration of Eco-plant game</td> <td>App .10</td> <td>Staff in Damascus DFEA</td> </tr> <tr> <td>2</td> <td>Feb. 2007</td> <td>Seminar on public awareness raising for industrial sector</td> <td>3</td> <td>Staff in Damascus DFEA</td> </tr> <tr> <td>3</td> <td>Feb., 2007</td> <td>Workshop with Chamber of Industry initiated by GCEA and DFEA</td> <td>30</td> <td>Damascus Chamber of Industry and member companies</td> </tr> </tbody> </table> <p style="text-align: center;">Homs DFEA</p> <table border="1" data-bbox="491 595 1305 752"> <thead> <tr> <th></th> <th>Year</th> <th>Type of workshop/seminar</th> <th># of participants</th> <th>Type of institutions/organizations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>May 2006</td> <td>Workshop with Chamber of Industry initiated by GCEA and DFEA</td> <td>50</td> <td>Homs Chamber of Industry and member companies</td> </tr> <tr> <td>2</td> <td>Feb. 2007</td> <td>Seminar on public awareness raising for industrial sector</td> <td>3</td> <td>Staff in Homs DFEA</td> </tr> </tbody> </table> <p style="text-align: center;">Aleppo DFEA</p> <table border="1" data-bbox="491 804 1305 1028"> <thead> <tr> <th></th> <th>Year</th> <th>Type of workshop/seminar</th> <th># of participants</th> <th>Type of institutions/organizations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>May 2006</td> <td>Seminar on awareness targeting the owner of factories, through Chamber of Industry</td> <td>Over 30</td> <td>Aleppo Chamber of Industry and member companies</td> </tr> <tr> <td>2</td> <td>Jan. 2007</td> <td>Seminar on public awareness raising for industrial sector</td> <td>9</td> <td>Staff in Aleppo DFEA</td> </tr> <tr> <td>3</td> <td>Jan. 2007</td> <td>Workshop with Chamber of Industry initiated by GCEA and DFEA</td> <td>30</td> <td>Aleppo Chamber of Industry and member companies</td> </tr> </tbody> </table> <p style="text-align: center;">Lattakia DFEA</p> <table border="1" data-bbox="491 1079 1305 1339"> <thead> <tr> <th></th> <th>Year</th> <th>Type of workshop/seminar</th> <th># of participants</th> <th>Type of institutions /organizations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>May 2006</td> <td>Workshop for demonstration of Eco-plant game</td> <td>3</td> <td>Staff in Lattakia DFEA</td> </tr> <tr> <td>2</td> <td>Jun. 2006</td> <td>Seminar on awareness targeting the owner of factories through Chamber of Industry</td> <td>6</td> <td>JUDCO Steel</td> </tr> <tr> <td>3</td> <td>Jan. 2007</td> <td>Seminar on public awareness raising for industrial sector</td> <td>12</td> <td>Staff in Lattakia DFEA</td> </tr> <tr> <td>4</td> <td>Jan. 2007</td> <td>Workshop with Chamber of Industry initiated by GCEA and DFEA</td> <td>20</td> <td>Lattakia Chamber of Industry and member companies</td> </tr> </tbody> </table> <p>更に、GCEAでも以下のセミナーとワークショップが行われた。</p> <p style="text-align: center;">GCEA</p> <table border="1" data-bbox="491 1440 1305 1839"> <thead> <tr> <th></th> <th>Year</th> <th>Type of workshop/seminar</th> <th># of participants</th> <th>Type of institutions/organizations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>June 2005</td> <td>Environmental education seminar</td> <td>21</td> <td>Environmental NGOs based in Damascus Governorate, public awareness staff in DFEA Damascus, and JOCV volunteers for environmental education</td> </tr> <tr> <td>2</td> <td>Jan. 2006</td> <td>Media event "Collaboration with Stakeholders on Environment"</td> <td>36</td> <td>DFEAs, NGOs, Youth Union, Mass Media</td> </tr> <tr> <td>3</td> <td>Feb. 2006</td> <td>Lecture on Public Awareness and Environmental Education</td> <td>22</td> <td>Public awareness staff in DFEAs</td> </tr> <tr> <td>4</td> <td>May 2006</td> <td>Workshop for demonstration of Eco-plant game</td> <td>3</td> <td>Staff in GCEA</td> </tr> </tbody> </table> | | Year | Type of workshop/seminar | # 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| 1 | May 2006 | Workshop for demonstration of Eco-plant game | 3 | Staff in Lattakia DFEA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Jun. 2006 | Seminar on awareness targeting the owner of factories through Chamber of Industry | 6 | JUDCO Steel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Jan. 2007 | Seminar on public awareness raising for industrial sector | 12 | Staff in Lattakia DFEA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Jan. 2007 | Workshop with Chamber of Industry initiated by GCEA and DFEA | 20 | Lattakia Chamber of Industry and member companies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 3 | Feb. 2006 | Lecture on Public Awareness and Environmental Education | 22 | Public awareness staff in DFEAs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | May 2006 | Workshop for demonstration of Eco-plant game | 3 | Staff in GCEA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 指標 | 達成状況 |
|---|---|
| <p>5.4 各県において環境教育に関する機関による定期的ネットワーキング会議が組織される</p> | <p>プロジェクト開始当初、環境教育や環境啓発に関わる関連機関による定期会合を行う母体とするためにシリア環境啓発フォーラム設立を企図し、住民啓発担当C/Pを支援した。シリア環境啓発フォーラムの最初の会合は2005年1月に、「環境に関するステークホルダーの連携」をテーマとしたメディアイベントとして開催した。その後、いくつかのデモンストレーションやセミナーがJICA専門家チームの支援の下、GCEAとDFEAのC/Pが2005年に実施した。</p> <p>地方自治環境省決定(decision No.2051 dated on Oct. 3, 2005)に従い、国家情報環境啓発委員会が組織された。この委員会は関連省庁やNGOで構成され、第3.6章で記述したように環境啓発に係る定期会合が行われた。従って、JICA専門家チームは、一般住民を対象とし、定期的会合を企図したシリア環境啓発フォーラムの役割を、重複を避けるために国家情報環境啓発委員会へ委譲することをGCEAへ提案し、合意された。よって、今後JICA専門家チームは、住民啓発の対象を学校生徒やNGOから汚染源(工場)へシフトさせ、優先4県(ダマスカス、ホムス、アレッポ、ラタキア)の工業会議所を通じた工場との定期会合実施を行うことになった。</p> <p>国家情報環境啓発委員の下、地域レベルの住民啓発課題に対処すること、国家情報環境啓発委員が定めた国家戦略や活動計画に準拠した計画策定と活動を行うこと、を目的とした地域レベルのサブ委員会が各県において組織された。このサブ委員会は地域レベルの住民啓発関連機関で構成され、定期的会合が持たれている。現在、全DFEAは、地域レベルの住民啓発に関する戦略策定を2007年12月までに行うよう、GCEAから要求されている。</p> <p>JICA専門家チームはGCEAに対して、モニタリングデータを用いた汚染源管理に資するアクションプラン策定を、地域レベルの住民啓発に関する戦略策定要請と平行して、DFEAへ要請することを提案した。GCEAとの協議の結果、GCEAは2007年8月に全DFEAに対して、専門家チームが準備した手順書に従ってこのアクションプランを策定するように求めるレターを送付した。この提案については、GCEAから国家情報環境啓発委員へ報告され、議論された。デリゾール、ラッカ、クネイトラの3DFEAを除く11のDFEAは、2007年10月にモニタリングデータを用いた汚染源管理に資するアクションプランをGCEAに提出した。</p> <p>提出されたアクションプランに対するJICA専門家チームのコメントや提案を基に、各DFEAは改訂と修正を行う予定である。各DFEAは、サブ委員会が認めた地域レベルの住民啓発戦略と計画実施の一環として、このアクションプランの実施が求められる。その改訂や活動結果はGCEAとサブ委員会に報告され、GCEAは国家情報環境啓発委員に報告しなければならない。</p> |