

付 属 資 料

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- 2 . Results of Field Survey on Padma Bridge Project
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JICA 環境社会配慮版 CRANES 使用マニュアル

CRANES with *Google Earth*

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1 . 動作環境

JICA環境配慮版CRANESの動作環境は以下の通りです。

サーバ動作環境

OS : Windows 2000 Server、Windows Server 2003

その他 : IIS

Sybase SQL Anywhere (データベースサーバ)

JRE 1.4以上

BASP21

.Net Framework2.0

Zip.exe (Info-Zip)

クライアント動作環境

OS : Windows XP、Windows Vista

その他 : Google Earth

PHPが動作するWebサーバ

.Net Framework2.0

XMLエディタ

2. インストール

JICA環境配慮版CRANESのインストールに使用するインストールCDの内容（フォルダ構成）は以下の通りです。

フォルダ名	内容
¥client¥web	CRANESとGoogle Earthを連携するためのPHPスクリプトが格納されています。
¥install¥client	意見ツリー表示クライアントのインストーラ、議事録のテンプレート（Excel）が格納されています。
¥install¥server	CRANESサーバプログラムのインストーラが格納されています。
¥doc	本マニュアルが格納されています。
¥server¥bin	CRANESサーバプログラムの実行ファイル、定義ファイルが格納されています。
¥server¥bin¥conf	CRANES指標計算プログラムの定義ファイルが格納されています。
¥server¥bin¥lib	CRANES指標計算プログラムで使用するライブラリが格納されています。
¥server¥db¥SQL	データベース構築用SQLファイルが格納されています。
¥server¥web	CRANESサーバのWebインターフェースプログラムが格納されています。
以下のフォルダはサーバにコピーするためのフォルダで内容は空です。	
¥server¥document	議事録を格納するフォルダです。
¥server¥log	プログラムのログを格納するフォルダです。
¥server¥request	CRANESサーバへの要求を格納するフォルダです。
¥server¥temp	CRANESサーバで使用するテンポラリフォルダです。
¥server¥treedata	意見ツリー編集データを格納するフォルダです。
¥server¥db¥backup	データベースのバックアップを格納するフォルダです。

2.1 サーバ

JICA環境配慮版CRANESのサーバのインストールについて記述します。

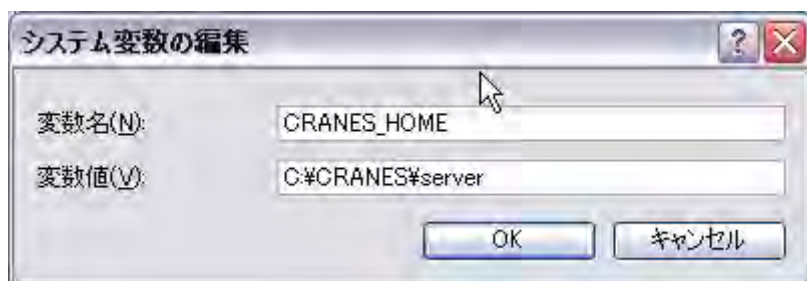
2.1.1 事前準備

CRANESサーバのインストールの前に必要なソフトのインストールを行ってください。

- ・ IIS
- ・ Sybase SQL Anywhere
- ・ JRE1.4以上
- ・ BASP21
- ・ .Net Framework2.0

CRANESサーバプログラム環境を格納するフォルダを作成してください。
作成したフォルダを環境変数CRANES_HOMEに設定します。

C:¥CRANES¥serverを環境変数CRANES_HOMEに設定する場合の例



2.1.2 CRANESサーバプログラムのインストール

インストールCD内のserver内のwebフォルダ以外を%CRANES_HOME%にコピーします。

下記のフォルダに対してIUSR_XXX、IWAM_XXXに対して書き込みの権限を与えます。
(XXXはサーバのコンピュータ名です。)

%CRANES_HOME%¥documents

%CRANES_HOME%¥log

%CRANES_HOME%¥request

%CRANES_HOME%¥temp

%CRANES_HOME%¥treedata

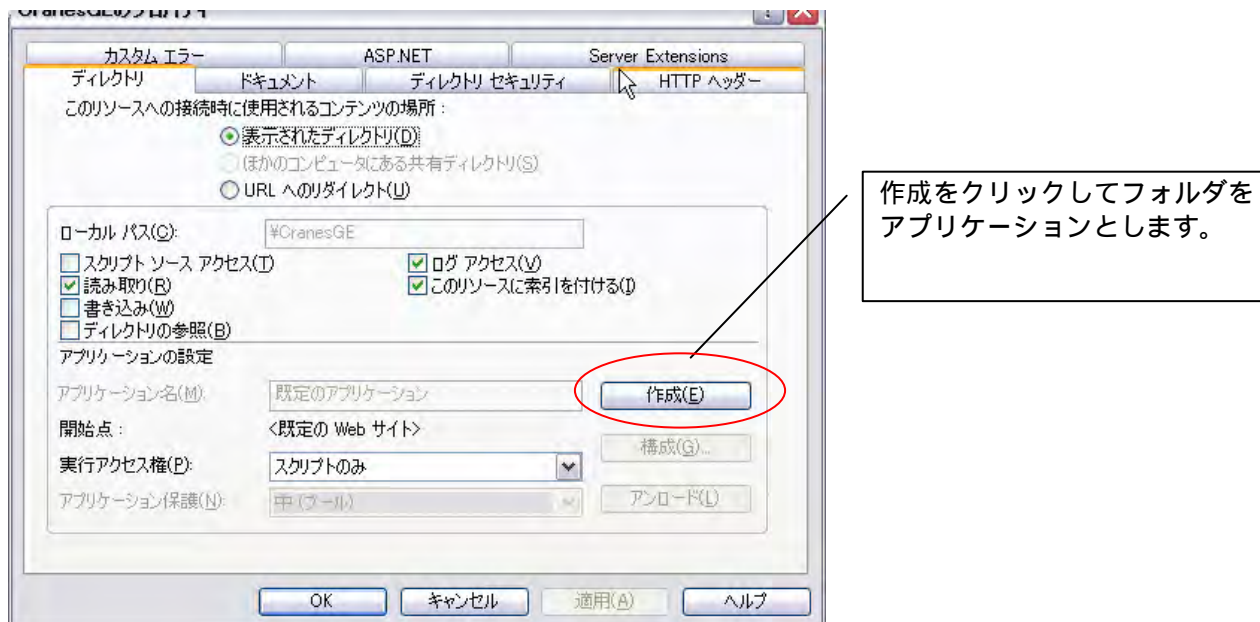
Info-Zipからzip232xN.zipをダウンロードし、解凍して得られるzip.exeを%CRANES_HOME%¥binにコピーします。

2.1.3 Webインターフェイスプログラムのインストール

IISのルートフォルダ（通常はC:\inetpub\wwwroot）直下にCRANESで使用するフォルダを作成します。

インストールCD内の¥server¥webフォルダの内容を作成したフォルダにコピーします。

IIS管理ツールから作成したフォルダのプロパティを開きアプリケーションとして作成します。



IIS管理ツールから 作成したフォルダ/tempのプロパティを開き、書き込みを許可します。



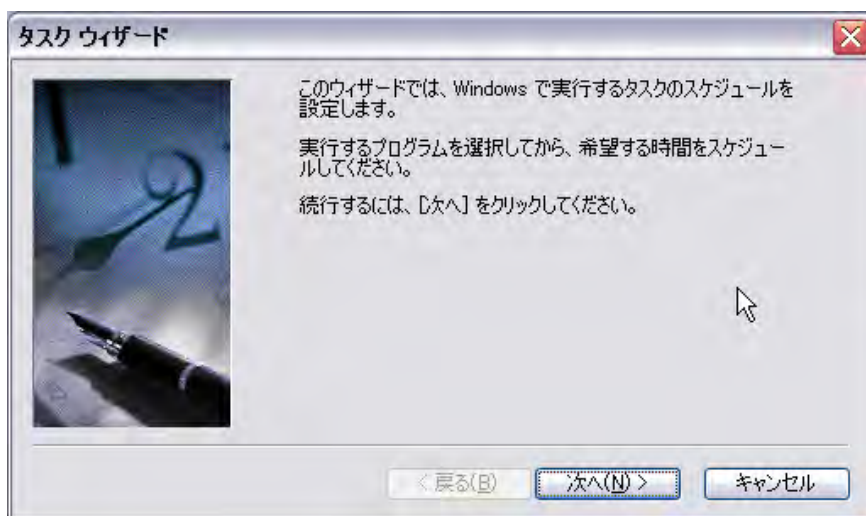
下記のフォルダに対してIUSR_XXX、IWAM_XXXに対して書き込みの権限を与えます。
(XXXはサーバのコンピュータ名です。)

IISのルートフォルダ¥作成したフォルダ¥temp

2.1.4 処理要求監視スクリプトのタスクスケジューラへの登録

CRANESサーバへの処理要求を監視し、処理を行うスクリプトをタスクスケジューラに登録します。

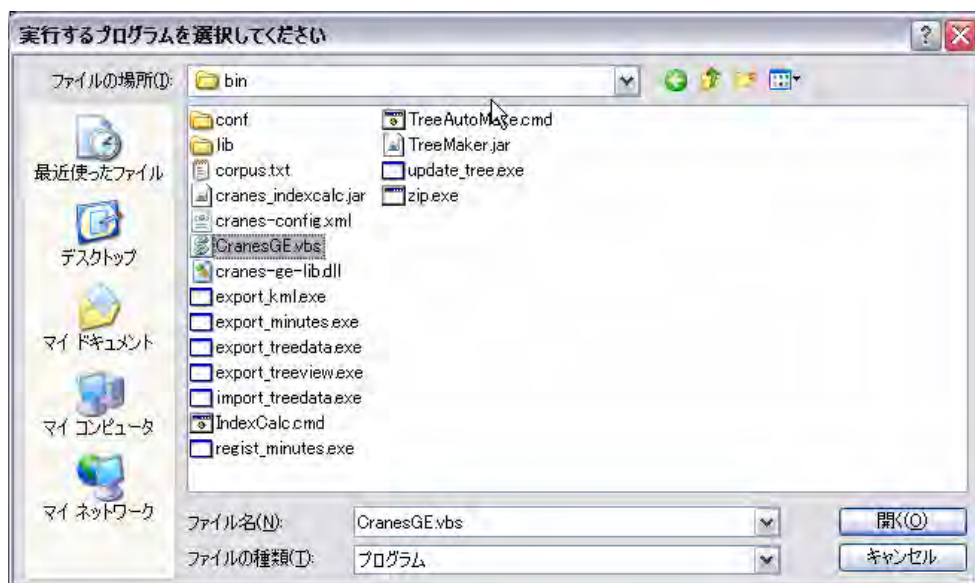
コントロールパネル->タスクからスケジュールされたタスクの追加を実行します。



参照をクリックし、ファイルダイアログを開きます。



%CRANES_HOME%\¥bin¥CranesGE.vbsを選択します。



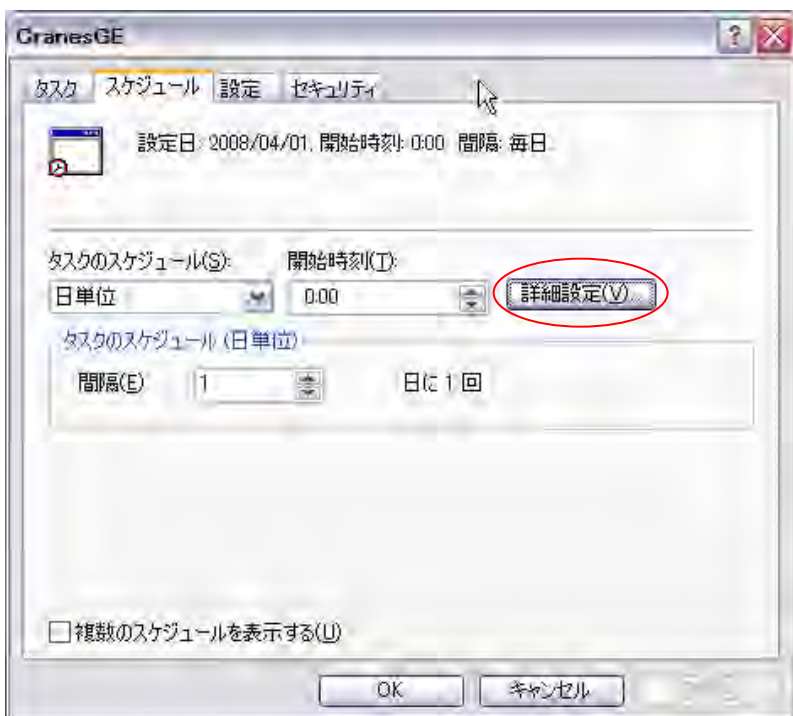
日単位を選択します。



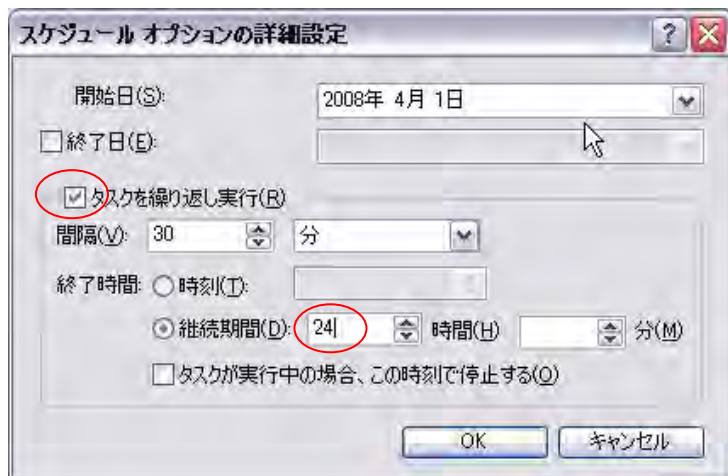
間隔を1日に1回に設定します。



タスクの追加後に追加したタスクのプロパティを開き詳細設定をクリックします。



タスクを繰り返し実行にチェックを行い、実行したい間隔を指定します。
継続時間には24時間を指定します。



2.1.5 データベースの構築

データベース構築の手順は以下の通りです。

- (1) Sybase Central等を使用してデータベースを作成します。
- (2) データベースにテーブルを作成するためにInteractive SQL等を使用してデータベース構築SQLを実行します。
データベース構築SQLは%CRANES_HOME%\db¥SQL¥create_tables.sqlです。
- (3) Sybase Central等を使用してプロジェクトの情報を登録します。
登録する情報は以下の通りです。

テーブル名：SPACE_INFO

カラム名	内容
Space_id	プロジェクトID
Space_name	プロジェクト名
Main_language	主となる言語 (jp、en等) 現在未使用
System_version	現在未使用
Range	KMLに指定するrangeの値
In_date	登録日

- (4) Sybase Central等を使用してユーザの情報を登録します。
登録する情報は以下の通りです。

テーブル名：USER_MST

カラム名	内容
Space_id	プロジェクトID
User_id	ユーザID
User_type	0：一般ユーザ 1：管理者
Password	パスワード
User_name	ユーザ名
Valid_flg	0：有効 1：無効

ユーザ情報はプロジェクト毎に登録します。

2.1.6 定義ファイルの編集

環境に合わせて設定ファイルとスクリプトファイルの内容を編集します。

%CRANES_HOME%\bin\%cranes-config.xml

CRANESの実行ファイルが参照する定義ファイルです。

```
<?xml version="1.0" encoding="UTF-8"?>
<CranesConfigXml>
  <!-- ODBCドライバの名前を指定します。 -->
  <!-- 現在下記のドライバ以外は未対応です。変更しないでください。 -->
  <Driver>Adaptive Server Anywhere 8.0</Driver>
  <!-- データベースのユーザIDを指定します。 -->
  <Uid>dba</Uid>
  <!-- データベースのパスワードを指定します。 -->
  <Password>sql</Password>
  <!-- データベース名を指定します。 -->
  <Database>cranes-ge</Database>
  <!-- データベースサーバ名またはIPアドレスを指定します。 -->
  <Host>localhost</Host>
  <!-- データベースサーバが使用するポートを指定します。 -->
  <Port>2638</Port>
  <!-- ログを出力するフォルダーを指定します。 -->
  <LogFolder>C:\CRANES\server\log</LogFolder>
</CranesConfigXml>
```

%CRANES_HOME%\bin\conf\%cranes.properties

CRANES指標計算ライブラリの定義ファイルです。

下記の行を環境に合わせて変更します。

```
cranes.database.cranes1.connection.url=jdbc:sybase:Tds:localhost:2638
```

IndexCalc.cmd

CRANES指標計算を行うバッチファイルです。

下記の行を環境に合わせて変更します。

```
set JAVA_HOME=C:\Program Files\Java\jre1.5.0_15
```

インストールしたJREのフォルダを指定します。

```
C:
```

```
cd "%CRANES_HOME%\bin"
```

CRANESをインストールしたドライブを指定します。

TreeAutoMake.cmd

意見ツリーの自動生成を行うバッチファイルです。

下記の行を環境に合わせて変更します。

```
set JAVA_HOME=C:\Program Files\Java\jre1.5.0_15
```

インストールしたJREのフォルダを指定します。

```
C:
```

```
cd "%CRANES_HOME%\bin"
```

CRANESをインストールしたドライブを指定します。

%CRANES?_HOME%¥bin¥CranesGE.vbs

CRANESサーバに対する要求を監視し、処理を行うためのスクリプトです。

下記の行を環境に合わせて変更します。

```
-----  
'      環境定義  
'-----  
  
" C_DBDriver    ---      ODBCドライバ名を定義します  
Const C_DBDriver = "Adaptive Server Anywhere 8.0"  
  
" C_DBUser      ---      DBのユーザIDを定義します  
Const C_DBUser = "dba"  
  
" C_DBPassword  ---      DBのパスワードを定義します  
Const C_DBPassword = "sql"  
  
" C_DBDatabase  ---      データベース名を定義します  
Const C_DBDatabase = "cranes-ge"  
  
" C_DBHost      ---      データベースサーバ名を定義します  
Const C_DBHost = "localhost"  
  
" C_DBPort      ---      データベースが使用するポートを定義します  
Const C_DBPort = "2638"  
  
" C_LOGDir      ---      ログ出力先を定義します  
Const C_LOGDir = "C:¥CRANES¥server¥log"  
  
" C_MakeTreeProg ---      ツリー自動生成プログラムの名称を定義します  
Const C_MakeTreeProg = "C:¥CRANES¥server¥bin¥TreeAutoMake.cmd"
```

IISのルートフォルダ/CranesGE/include/setenv.inc
CRANESサーバのWebの定義ファイルです。

```
<SCRIPT LANGUAGE=VBScript RUNAT=Server>
'-----
' ファイル名      : setenv.inc
'
' 機能概要       : 環境設定ファイル
'
' 備考           : 下記の変数を実行環境に合わせて変更してください
'
' 履歴           : 2008/03/17 ( IIS ) 大越 新規作成
'-----
" C_DBDriver    ---      ODBCドライバ名を定義します
Const C_DBDriver = "Adaptive Server Anywhere 8.0"

" C_DBUser      ---      DBのユーザIDを定義します
Const C_DBUser = "dba"

" C_DBPassword  ---      DBのパスワードを定義します
Const C_DBPassword = "sql"

" C_DBDatabase  ---      データベース名を定義します
Const C_DBDatabase = "cranes-ge"

" C_DBHost      ---      データベースサーバ名を定義します
Const C_DBHost = "localhost"

" C_DBPort      ---      データベースが使用するポートを定義します
Const C_DBPort = "2638"

</SCRIPT>
```

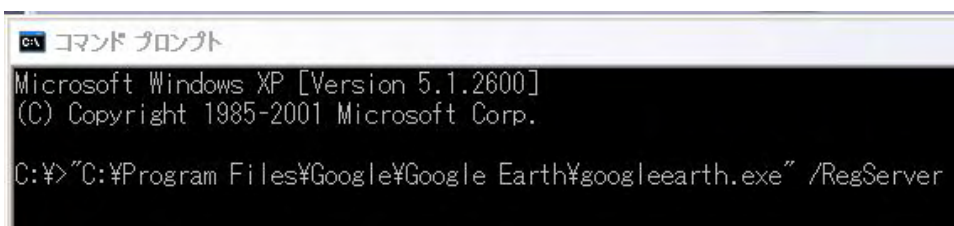
2.2 クライアント

JICA環境配慮版CRANESのクライアントのインストールについて記述します。

2.2.1 Google Earthのインストール

Google Earthをオフィシャルサイト (<http://earth.google.com/>) からダウンロードしてインストールします。

本システムではGoogle Earthと通信するためにGoogle Earth COM APIを利用しています。システムからGoogle Earth COM APIを利用するために、Google Earthをインストールした後、コマンドプロンプトから以下のコマンドを実行してGoogle EarthのCOM登録を行ってください。



```
コマンド プロンプト
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\>"C:\Program Files\Google\Google Earth\googleearth.exe" /RegServer
```

“ C:\Program Files\Google\Google Earth ” の部分はGoogle Earthをインストールしたフォルダ名に置き換えてください。上図はデフォルトでインストールした場合の例です。

2.2.2 意見ツリー表示プログラムのインストール

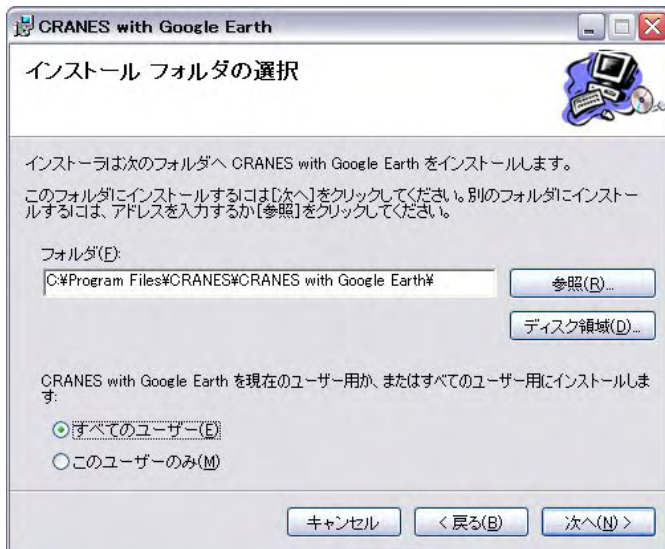
意見ツリー表示プログラムの動作にはMicrosoft .NET Framework 2.0が必要です。使用するPCにMicrosoft .NET Framework 2.0がインストールされていない場合は事前にインストールしておきます。

インストーラ (CRANES with Google Earth Installer.msi) を実行します。

インストーラはCRANESインストールCD内の¥install¥clientフォルダにあります。



「次へ」ボタンをクリックします。



インストールするフォルダを選択し、「次へ」ボタンをクリックします。



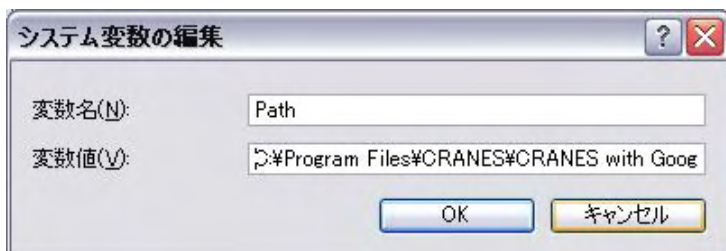
「次へ」ボタンをクリックしてインストールを開始します。



「閉じる」ボタンをクリックしてインストールを完了します。

インストール完了後の環境設定を行います。

- ・意見ツリー表示プログラムをインストールしたフォルダをシステム環境変数のPATHに追加します。



デフォルトでインストールした場合、フォルダは“C:¥Program Files¥CRANES¥CRANES with Google Earth”になります。

- ・意見ツリー表示プログラムの設定ファイルを環境に合わせて編集します。

意見ツリー表示プログラムをインストールしたフォルダ内にあるアプリケーション設定ファイル (CRANES with Google Earth.exe.config) をメモ帳等のテキストエディタから開き、KMLファイル、意見ツリー表示データファイル、議事録ファイルを格納するフォルダのパスを定義します。

CRANES with Google Earth.exe.configの内容 (一部抜粋)

```
<applicationSettings>
  <CRANES_with_Google_Earth.My.MySettings>
    <setting name="kmlpath" serializeAs="String">
      <value>C:¥CRANES¥kml</value>
    </setting>
    <setting name="docpath" serializeAs="String">
      <value>C:¥CRANES¥doc</value>
    </setting>
    <setting name="xmlpath" serializeAs="String">
      <value>C:¥CRANES¥xml</value>
    </setting>
  </CRANES_with_Google_Earth.My.MySettings>
</applicationSettings>
```

(1) KMLファイルを格納するフォルダ名

下線の部分をCRANESサーバからダウンロードしたKMLファイルを格納するフォルダ名に書き換えます。

```
<setting name="kmlpath" serializeAs="String">  
    <value>C:¥CRANES¥kml</value>  
</setting>
```

(2) 議事録ファイルを格納するフォルダ名

下線の部分をCRANESサーバからダウンロードした議事録ファイルを格納するフォルダ名に書き換えます。

```
<setting name=" docpath " serializeAs="String">  
    <value>C:¥CRANES¥ doc</value>  
</setting>
```

(3) 意見ツリー表示データファイルを格納するフォルダ名

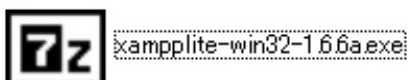
下線の部分をCRANESサーバからダウンロードした意見ツリー表示データファイルを格納するフォルダ名に書き換えます。

```
<setting name=" xmlpath " serializeAs="String">  
    <value>C:¥CRANES¥ xml</value>  
</setting>
```

2.2.3 Webサーバのインストール

Google Earthと意見ツリー表示プログラムを連携させるには、PHPが動作可能なWebサーバが必要になります。ここではApache (Webサーバ) とPHPをまとめてインストールできるXAMPP Liteの導入例を記述します。

XAMPP Liteの自己解凍型アーカイブファイルを実行します。



(平成20年4月1日時点の最新バージョンは xampplite-win32-1.6.6a.exe です。)

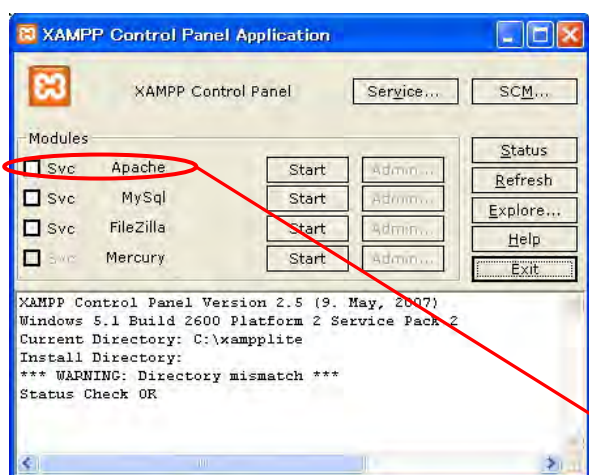


解凍先のフォルダを選択して「Extract」ボタンをクリックします。

Windows Vistaの場合”Program Files”以外のフォルダを選択してください。

解凍処理が終わると、解凍先にxamppliteというフォルダが作成されます。

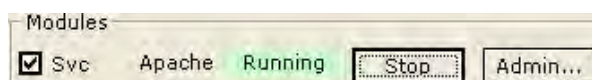
xamppliteフォルダ内にxampp-control.exeという実行ファイルがあるので実行します。



XAMPP のコントロールパネルが表示されたら、Apache をサービス化するために「Apache」の横にあるチェックボックスにチェックを入れます。

チェックを入れると確認画面が表示されますので、OK をクリックして下さい。

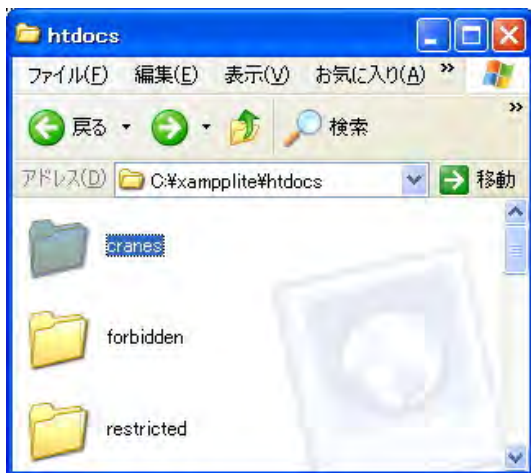
最後にStartボタンをクリックしてApacheをRunning状態にします。



Apacheが動作しているか確認するには、インターネットブラウザのアドレス欄にhttp://localhostと入力することで確認できます。

以下の画面が表示されていれば、XAMPPの設定は完了です。





XAMPP の設定後、xampplite フォルダ内の htdocs フォルダに移動します。

移動後、htdocs フォルダ内に cranes フォルダを作成します。

作成した cranes フォルダ内に PHP スクリプトファイル (treeview.php) を配置します。

PHP スクリプトファイルは CRANES インストール CD 内の ¥client¥web フォルダにあります。

3. 議事録の作成

CRANES サーバにアップロードできる議事録ファイルの形式は下記のようなタグ付きのテキストファイルです。

```
<header>
<title>会議の名称</title>
<venue>会議の開催場所</venue>
<date>会議の日付</date>
<organizer>会議の主催者</organizer>
<longitude>会議の場所の位置経度</longitude>
<latitude>会議の場所の位置緯度</latitude>
</header>
<general>概要</general>
<body>
<opinion>
<type>opinion または category</type>
<name>意見の発言者</name>
<address>発言者の居住地</address>
<organization>発言者の所属する組織</organization>
<occupation>発言者の職業</occupation>
<summary>発言の概要</summary>
<content>発言本文</content>
<response>発言に対する回答</response>
<longitude>発言に関する位置経度</longitude>
<latitude>発言に関する位置緯度</latitude>
<etc>その他</etc>
</opinion>
意見数分<opinion> ~ </opinion>を繰り返す
</body>
<others>その他の内容</others>
```

<opinion> ~ </opinion> が 1
つの意見を表します。

意見に対する座標が未指定の
場合は議事録の座標と同じと
みなします。

上記のようにタグを意識しながら議事録を作成するのは困難ですので議事録を作成するためのテンプレートを用意しています。テンプレートは Excel で作成されていて、Excel マクロを使用して入力内容をタグ付きテキストに変換します。

テンプレートの Excel ファイルは CRANES インストール CD 内の¥install¥client¥minutes.xls です。

このテンプレートファイルをコピーして議事録を作成してください。

3.1 議事録作成テンプレート

3.1.1 ボタン

B15										
	A	B	C	D	E	F	G	H	I	J
1		ADD OPINION				DELETE OPINION			SAVE	

ADD OPINION ボタン	意見入力エリアを追加
DELETE OPINION ボタン	意見入力エリアを削除
SAVE ボタン	入力中の内容を議事録ファイルに保存

3.1.2 ヘッダー部入力エリア

3	TITLE									
4	VENUE									
5	DATE									
6	ORGANIZER									
7	LONGITUDE		°		'		°			
8	LATITUDE		°		'		°			

TITLE	議事録を取得した会議の名称
VENUE	会議の開催場所
DATE	会議の日付
ORGANIZER	会議の主催者
LONGITUDE	会議の場所の位置経度
LATITUDE	会議の場所の位置緯度

3.1.3 概要入力エリア

10	GENERAL	
----	---------	--

GENERAL	議事録の概要
---------	--------

3.1.4 意見入力エリア

12	OPINION	opinion				
13	NAME					
14	ADDRESS					
15	ORGANIZATION					
16	OCCUPATION					
17	SUMMARY					
18	CONTENT					
19	RESPONSE					
20	LONGITUDE	°		'		″
21	LATITUDE	°		'		″
22	ETC					

OPINION	意見種別 opinion または category
NAME	意見の発言者
ADDRESS	発言者の居住場所
ORGANIZATION	発言者の所属する組織
OCCUPATION	発言者の職業
SUMMARY	発言の要約
CONTENT	発言本文
RESPONSE	発言に対する回答
LONGITUDE	発言に関する位置経度
LATITUDE	発言に関する位置緯度
ETC	その他

3.1.5 その他入力エリア

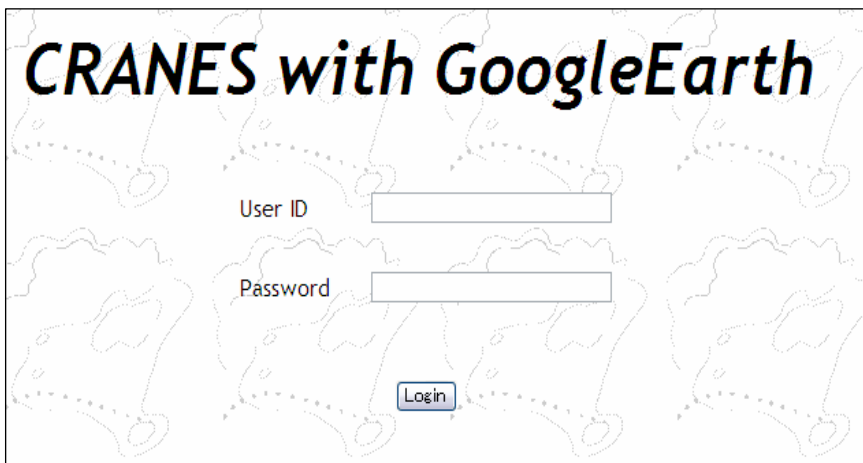
48	OTHERS						
49							
50							
51							
52							
53							

OTHERS	その他の内容
--------	--------

4 . CRANES サーバへのアクセス

ここではCRANESサーバとのデータの受け渡しについて記述します。CRANESサーバにはWebブラウザを使用してアクセスします。

4.1 ログイン画面



The image shows a login interface for 'CRANES with GoogleEarth'. The title is prominently displayed at the top. Below the title, there are two input fields: one labeled 'User ID' and another labeled 'Password'. A 'Login' button is positioned below the password field. The background of the page is a light-colored map of Japan, overlaid with several crane icons and dotted lines, suggesting a geographical or tracking theme.

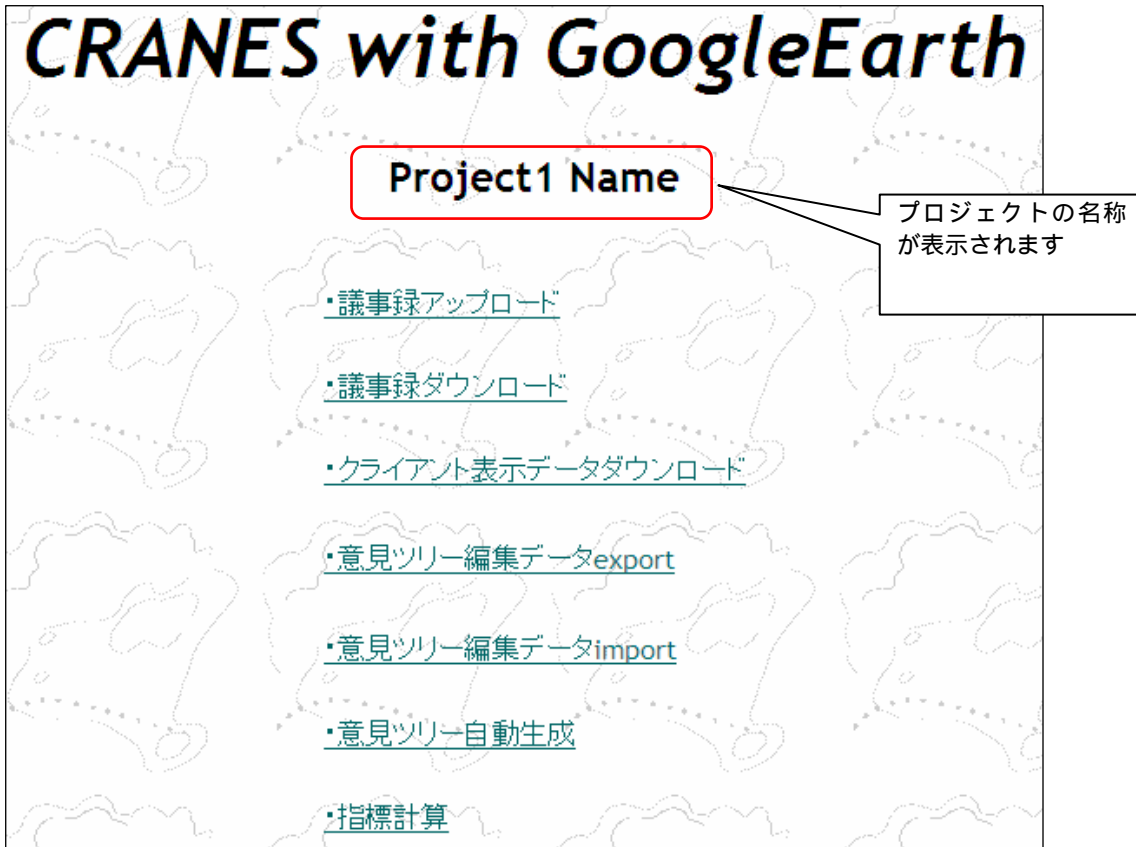
システムを使用するためにログインを行う画面です。

登録されたユーザ以外はシステムを使用することはできません。

ユーザID、パスワードを入力して「Login」ボタンをクリックしてください。

正常にログインできた場合、メニュー画面を表示します。

4.2 メニュー画面



CRANESサーバが提供する機能のメニュー画面です。

a) 議事録アップロード

議事録をサーバにアップロードする画面を表示します。
ここで議事録をサーバにアップロードすることができます。

b) 議事録ダウンロード

議事録をサーバからダウンロードする画面を表示します。

ダウンロードするファイルは現在、サーバに格納されている全ての議事録ファイルを圧縮したファイルです。解凍したファイルを、意見ツリー表示プログラムのアプリケーション設定ファイル（P135参照）で定義したフォルダに格納してください。

c) クライアント表示データダウンロード

クライアントで使用するファイルをダウンロードする画面を表示します。

ダウンロードするファイルは2つのファイルを含んだ圧縮ファイルです。解凍したファイルを意見ツリー表示プログラムのアプリケーション設定ファイル（P135参照）で定義したそれぞれのフォルダへ格納してください。

- ・ 拡張子が.kmlのファイル

アプリケーション設定ファイルで定義したKMLフォルダへ格納します。

- ・ 拡張子が.xmlのファイル

アプリケーション設定ファイルで定義した意見ツリー表示データフォルダへ格納します。

d) 意見ツリー編集データexport

意見ツリーを手動で編集するためのファイルをダウンロードする画面を表示します。

e) 意見ツリー編集データimport

手で編集した意見ツリーをサーバにアップロードする画面を表示します。アップロードされたファイルの内容に従いデータベースの意見ツリーの構造を更新します。

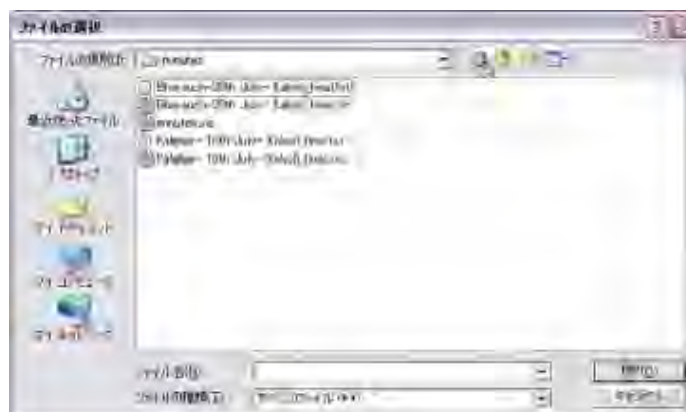
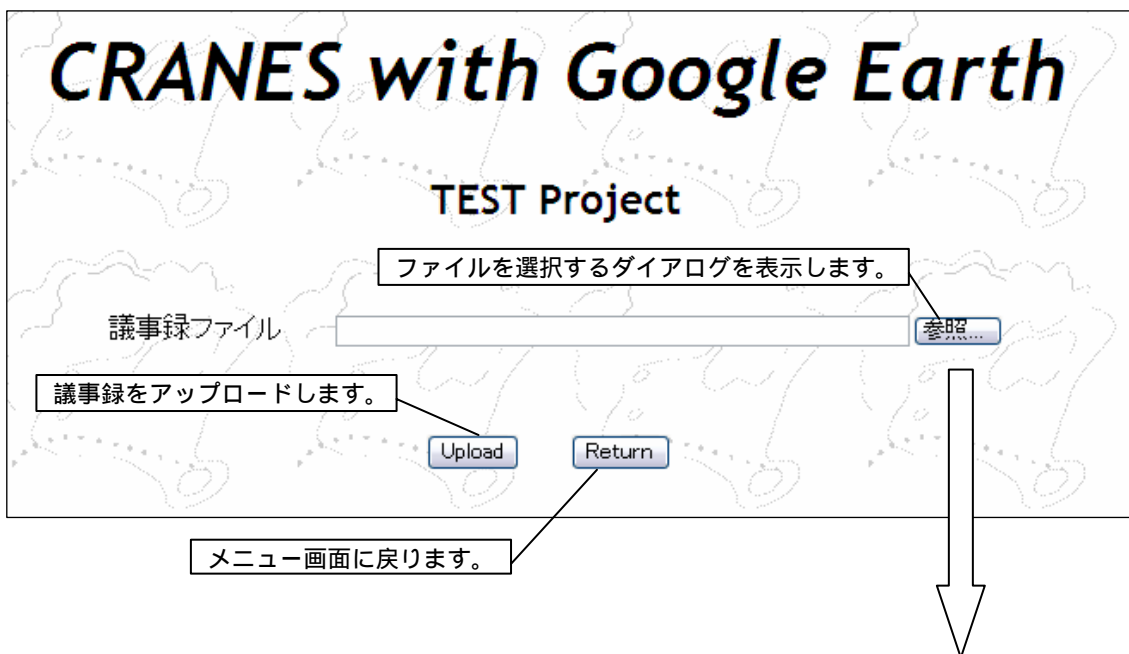
f) 意見ツリー自動生成

意見ツリー自動生成処理を行います。

g) 指標計算

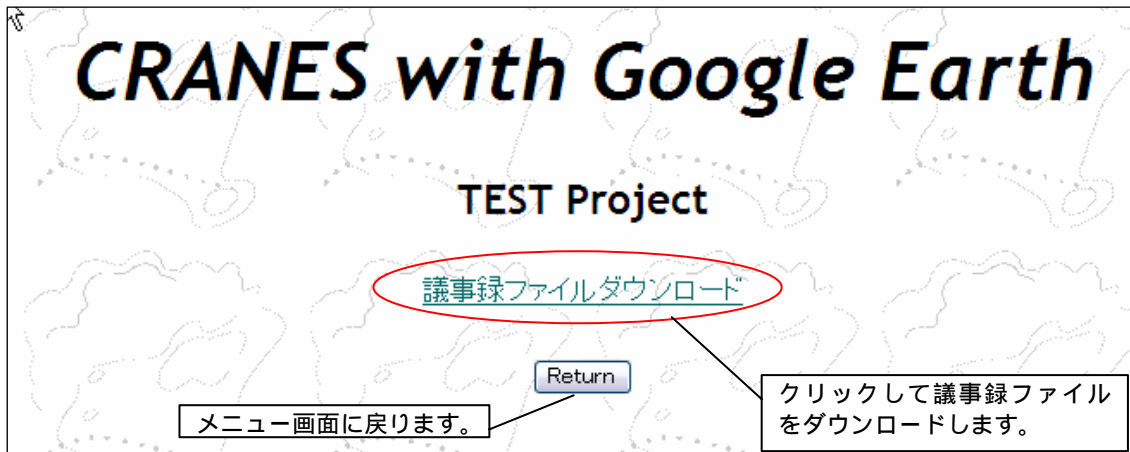
注目度を示す指標値の計算を行います。

4.3 議事録アップロード画面



作成した議事録ファイルをCRANESサーバにアップロードする画面です。アップロードした議事録ファイルの内容はデータベースに登録されます。

4.4 議事録ダウンロード画面



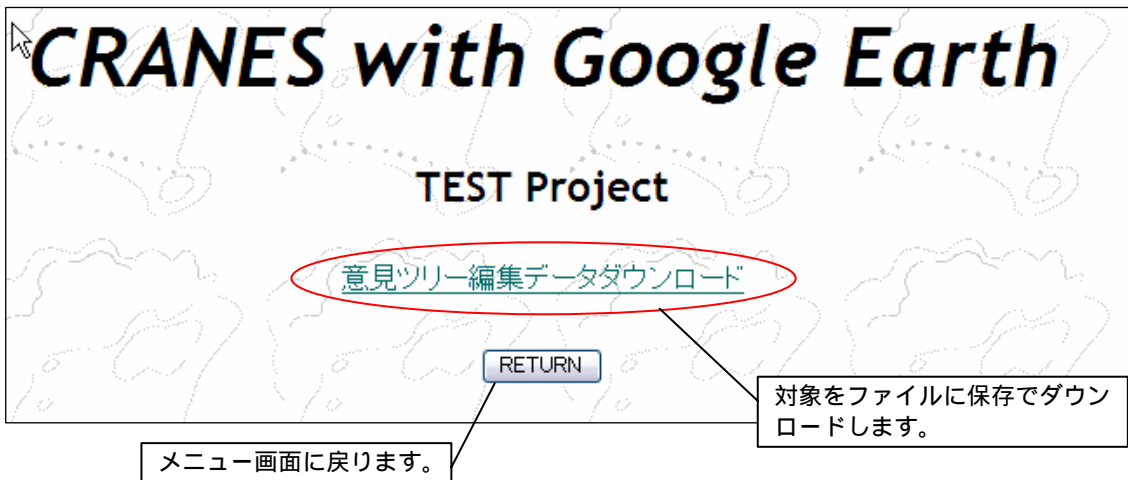
サーバにアップロードされている全議事録ファイルをダウンロードする画面です。
ファイルはzip形式で圧縮されていますので、解凍して議事録ファイルを格納するフォルダに格納してください。

4.5 クライアント表示データダウンロード画面



クライアント表示データファイルをダウンロードする画面です。
クライアント表示データファイルは意見ツリー表示データファイルとKMLファイルがzip形式で圧縮されたファイルです。解凍してそれぞれの格納フォルダに格納してください。

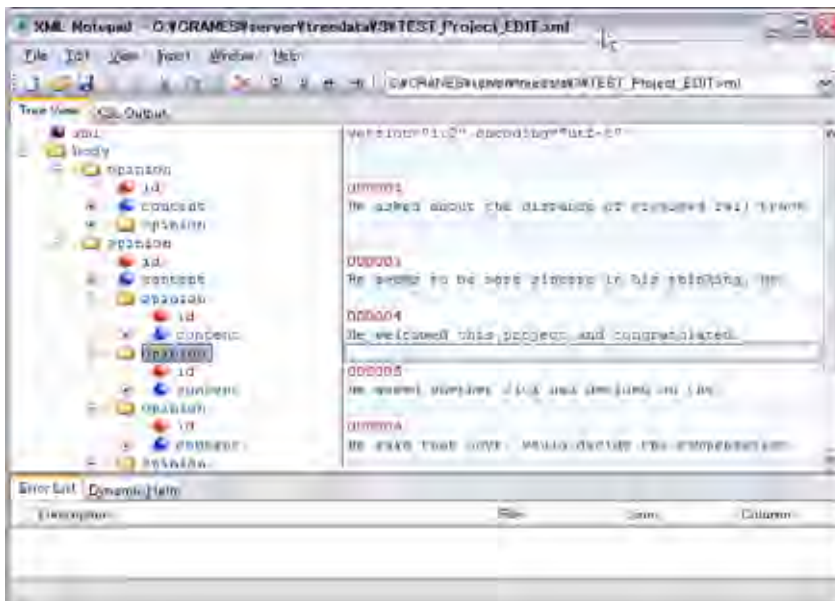
4.6 意見ツリー編集データexport画面



意見ツリーの構成を手動で編集するための意見ツリー編集データファイルをダウンロードする画面です。

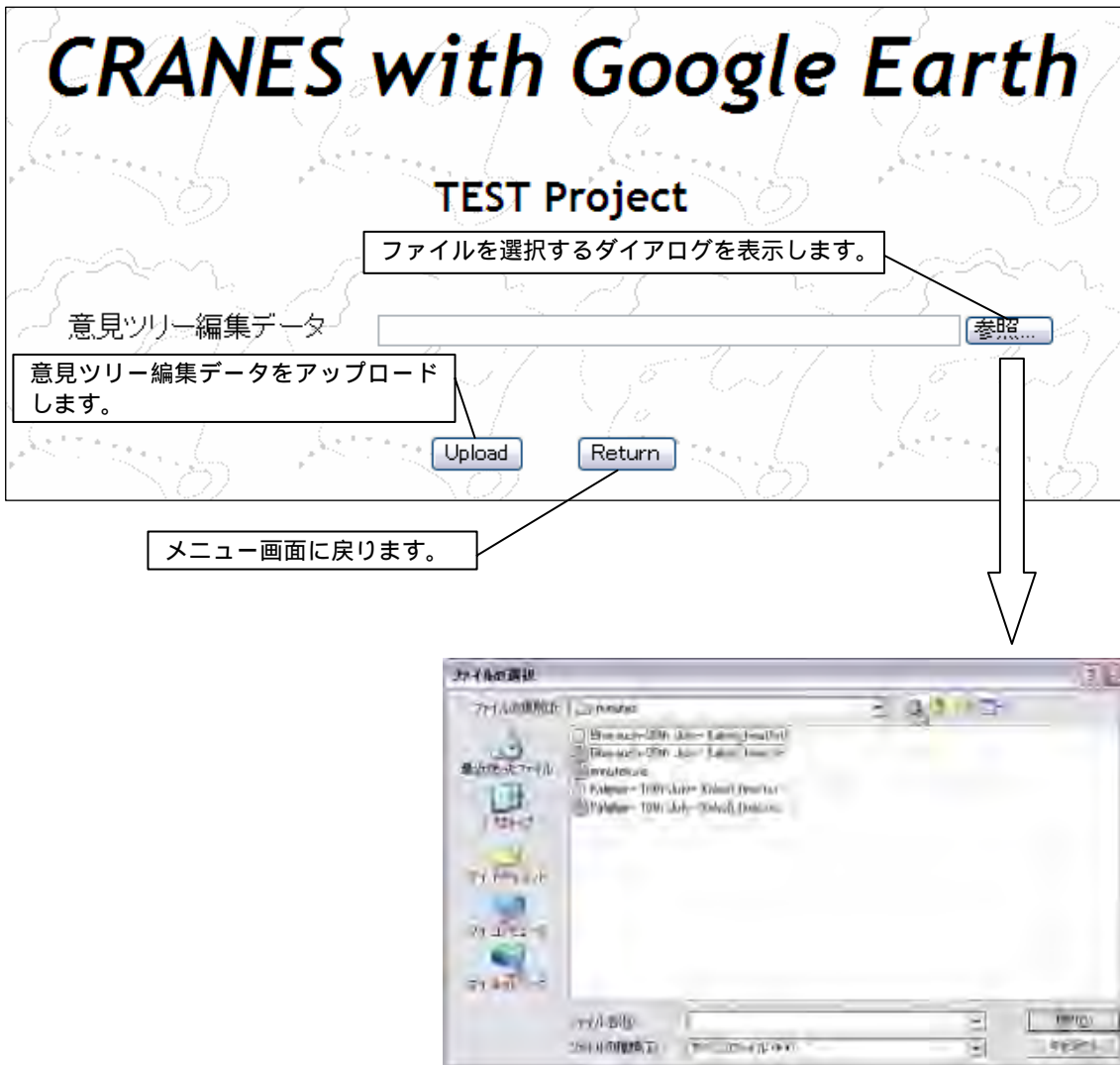
ダウンロードしたファイルはXML形式になっているのでノード編集が可能なXMLエディタでツリーの構成を編集することができます。

XML Notepad上での編集作業の例



編集はopinionタグ単位でのノードの移動以外は行わないでください。これはあくまでツリーの構成を変更するための機能です。

4.7 意見ツリー編集データimport画面



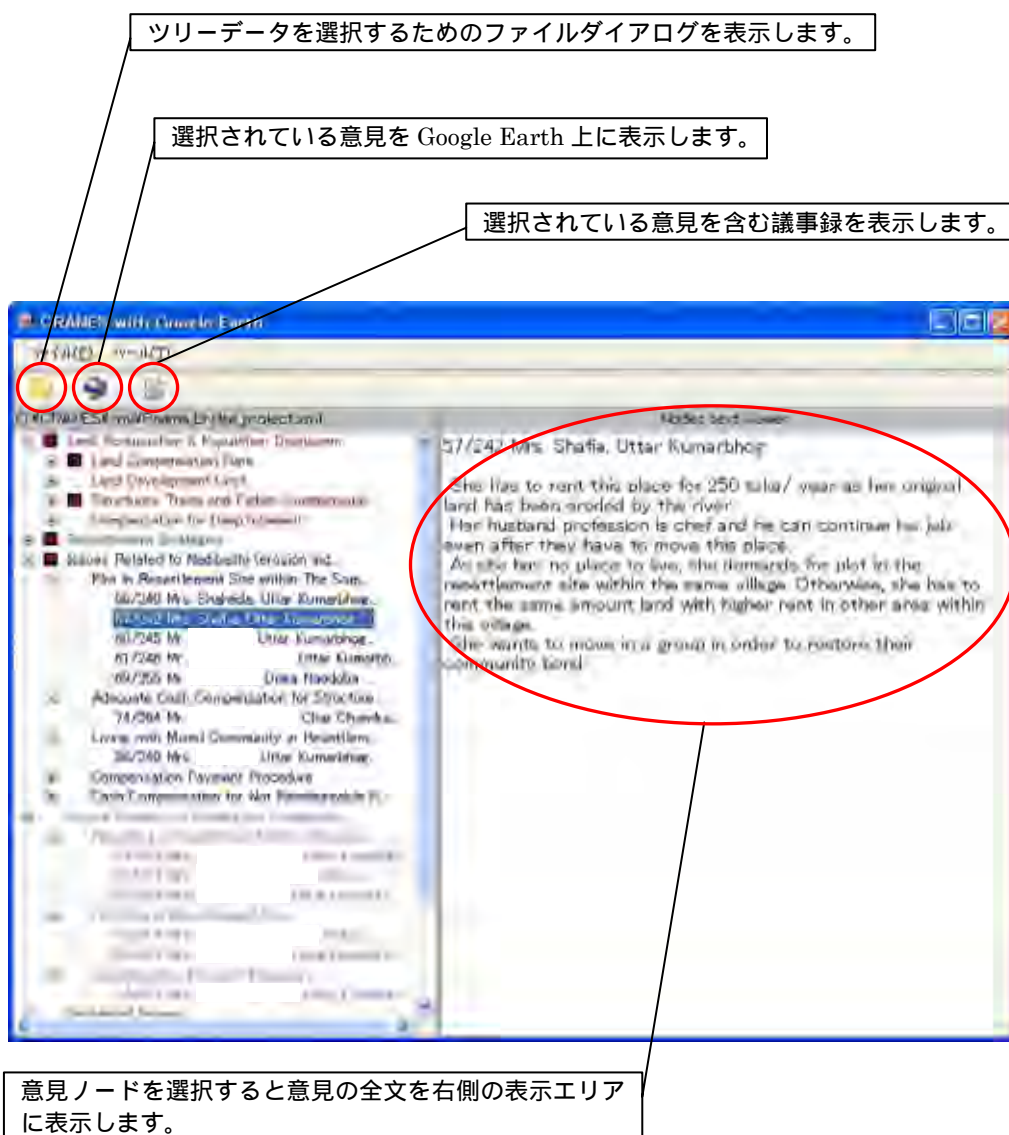
ツリーの構成を編集した意見ツリー編集データファイルをCRANESサーバにアップロードする画面です。

アップロードした意見ツリー編集データファイルの内容に従いデータベース内のツリーの構成が更新されます。

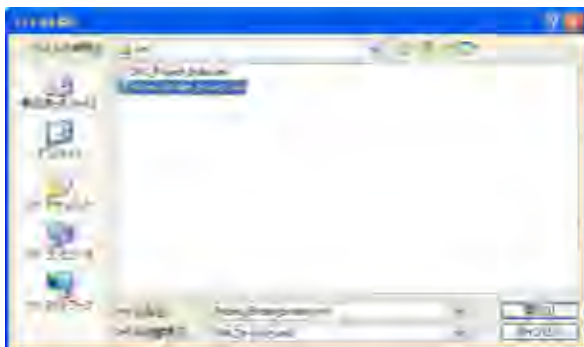
5 . 意見ツリー表示プログラムの操作

意見ツリー表示プログラムは、ツリー表示用のデータ (XML) を基に、集められた意見をツリー形式で出力します。ツリーはカテゴリ毎に色分けされ、特に注目度の高いものには赤いマーク (■) が付くため、どのカテゴリの、どの意見が注目されているのかが一目で把握できます。

また、地点情報を持つ意見についてはGoogle Earthと連携し、どの地点に関連する意見なのかを地図上から確認することができます。



【ファイルを開く】



ツールバー上のフォルダボタンをクリックすると、意見表示ツリーデータのファイルダイアログが表示されます。(メニューバー上の「ファイル」「開く」も同様です。)

表示するファイルを選択し、開くボタンをクリックしてください。

意見ツリー表示データが格納されるデフォルトフォルダはC:\¥CRANES¥xmlです。

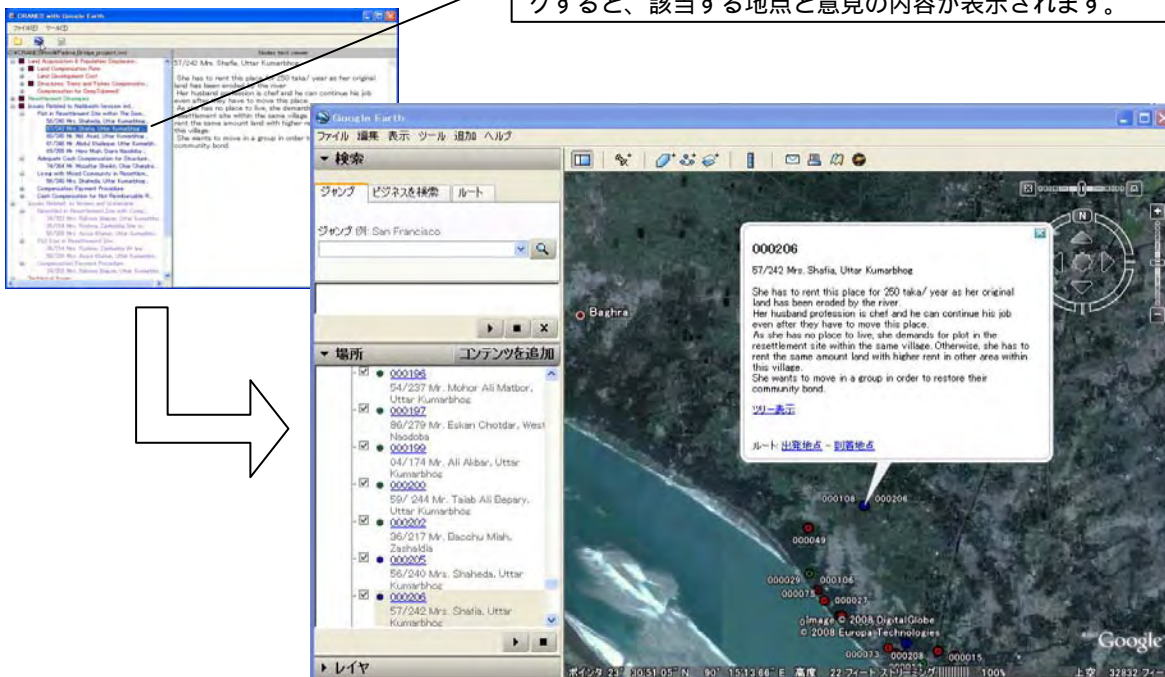
【Google Earthとの連携】



ツリー上で選択された意見が地点情報を持つ場合、ツールバーのGoogle Earthボタンをクリックすることで、地図上の該当する地点を表示し、意見の内容をポップアップします。

意見が選択されていない場合や、地点情報を持たない意見を選択した場合は、Google Earthボタンをクリックしても地図上の該当する地点には移動しません。その場合はGoogle Earthの起動処理のみが行われます。

意見を選択状態にしてから Google Earth ボタンをクリックすると、該当する地点と意見の内容が表示されます。

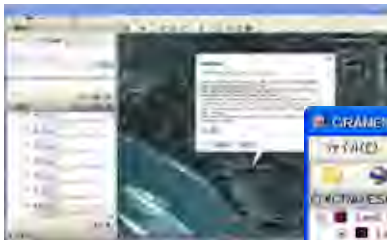




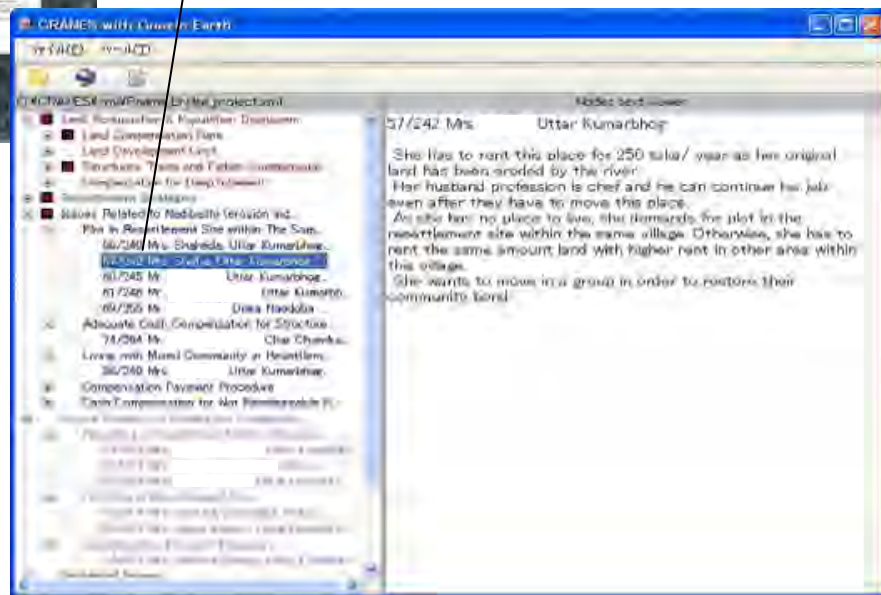
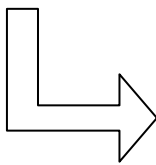
Google Earth上でポップアップされた意見の下には「ツリー表示」と書かれたリンクが貼られています。

このリンクをクリックすると、意見ツリー表示プログラムの該当するツリーノードが選択状態になります。

この機能を使うにはApacheが起動していなければなりません。



「ツリー表示」と書かれたリンクをクリックすると、意見表示プログラムに、該当するツリーノードが選択状態が表示されます。

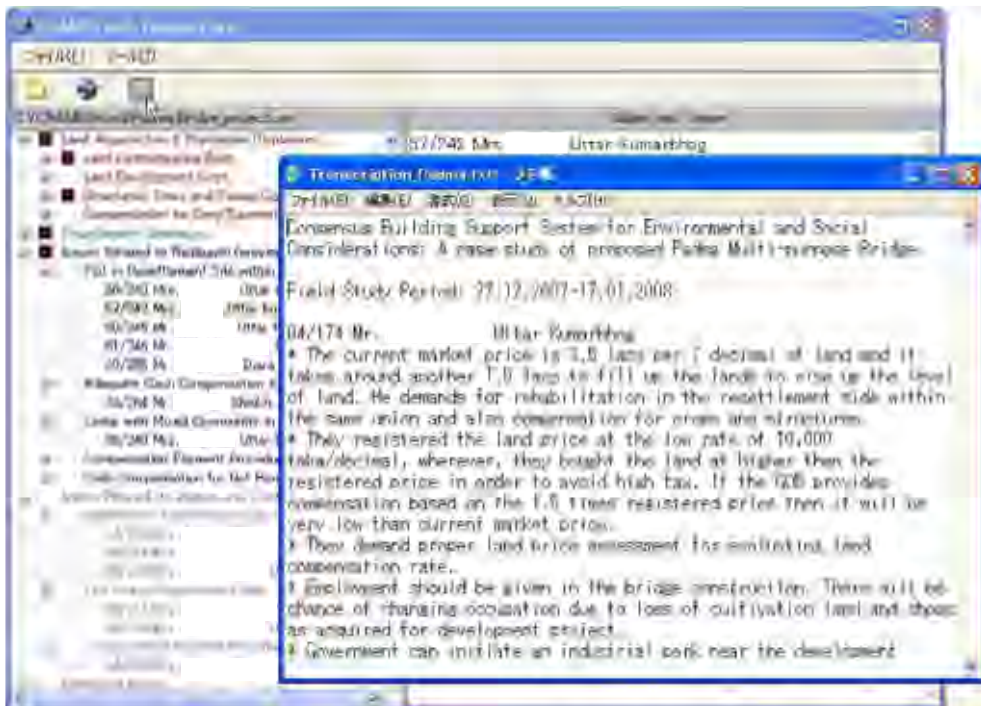


【ドキュメントファイルの表示】

ツリー上で意見が選択されている状態で、ツールバーのドキュメントボタンをクリックすると、その意見が含まれるドキュメントファイルが開かれます。

選択された意見を含むドキュメントファイルが無い場合は、ドキュメントボタンをクリックすることができません。

ドキュメントファイルは、そのファイルに関連付けられたアプリケーションで開かれます。

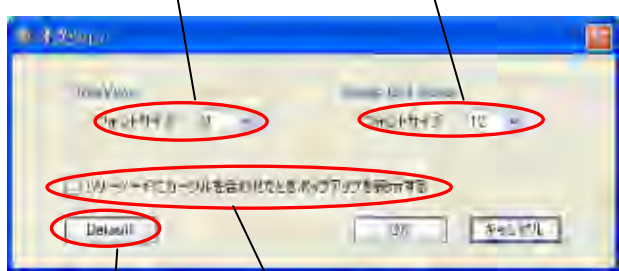


【オプションについて】

メニューバー上の[ツール] [オプション]から、オプション画面を開くことができます。

選択したツリーノードの内容を表示する、テキストエリアのフォントサイズを変更することができます。

ツリー部分のフォントサイズを変更することができます。



設定の内容をデフォルトの内容に戻します。

ツリーノードにマウスカーソルを合わせた際、ノードの内容をポップアップ表示します。

2. Results of Field Survey on Padma Bridge Project

Consensus Building Support System for Environmental and Social Considerations: A Case Study of Proposed Padma Multi-purpose Bridge

Field Study Period: Dec 2007 - Feb 2008

04/174 Mr. A, Uttar Kumarbhog

- The current market price is 3.5 lacs per 7 decimal of land and it takes around another 1.5 lacs to fill up the lands to rise up the level of land. He demands for rehabilitation in the resettlement side within the same union and also compensation for crops and structures.
- They registered the land price at the low rate of 10,000 taka/decimal, wherever, they bought the land at higher than the registered price in order to avoid high tax. If the GOB provides compensation based on the 1.5 times registered price then it will be very low than current market price.
- They demand proper land price assessment for evaluating land compensation rate.
- Employment should be given in the bridge construction. There will be chance of changing occupation due to loss of cultivation land and shops as acquired for development project.
- Government can initiate an industrial park near the development project.
- Floating people should be given separate plot in the resettlement site as they have different social status
- At least 20 decimals of land should be provided for each AP's in resettlement side. Otherwise they will not be able to stay in the resettlement site.
- It would be highly appreciable if the mosque and graveyard of 200 years history not been relocated other wise the GOB should construct new mosque and provide space for graveyard in the resettlement site.

01/177 Mr. B, Uttar Kumarbhog

- Owner of one deep tube well, is concerned about the effectiveness of deep tube well after acquisition of land as some parts of the land are under the land acquisition boundary.

05/178 Mr. C, Uttar Kumarbhog

- They need adequate compensation including structure and trees.
- They demands for plot in the resettlement site within the same village.
- They want to move to the resettlement site after fully developed the resettlement site.
- They want compensation in cheque through their bank account or hand to hand service.
- They don't want to stay with non-permanent residents within the same resettlement site.

06/181 Mr. D, Uttar Kumarbhog

- 5 decimal land will not be adequate in the resettlement site as they need place to process the agricultural goods.
- They eat vegetables whatever they produce around the houses so they want wider space than 5 decimal.
- At least 20 decimal is required to build houses and serve the above mentioned purpose.
- They fear that the resettlement site will not be adequate to serve their purpose so they want extension of proposed resettlement site.
- As the scarcity of land and the growing price of land, it is very difficult for them to buy new lands to continue their livelihood as a farmer.
- Permanent residents like them opposed to stay with non-permanent residents in the same resettlement site.

08/182 Mr. E, Uttar Kumarbhog

- He will loose his agricultural land as it is under the proposed acquisition land for the development of bridge.

- The current market price is 2 lacs per 7 decimals of land.
- He demands for market price as a land compensation rate.

Mrs. Monoda Begum, Uttar Kumarbhog Village

- She doesn't want to get plot in resettlement site. She wants to buy land by herself after getting appropriate compensation.
- She concerned about process of handing over the compensation. She requested for hand to hand service for giving compensation of APs. It would be very difficult to get full compensation if it is directly from DC office as she expressed that there will be some harassments and delays during this processes.
- She has no bank account and compensation provided through bank account is not preferable as it is time consuming and requiring high amount of deposit money. If GOB provides assistance to open new account for them then she will have no problem of getting money through bank account.

03/183 Mr. F, Uttar Kumarbhog

- He is one of the "Nadibashi affected peoples".
- He rent one house which is under the proposed land acquisition map. He wants the plot in the resettlement site.

09/184 Mr. G, Dakshin Medinimandal

- They are hindu and doing leather business. 30 houses depend on the income of this business and the amount of rent they get from wholesale fish market.
- Temple has been placed there and source of income to run the temple is from the rent of brick fields.
- They want to move in a group in separate resettlement site in the Uttar Medinimandal, because, there may be protest from other residents in the resettlement site if they live in the same resettlement site due to possibility of producing bad smell.
- They want temple in the resettlement site and to run the temple government donation is requested.

10/185 Mr. H, Dakshin Medinimandal

- There are 29 businessmen run the Mawa fish market and there has been at least 1,200 persons directly or indirectly depend on this market. More than 60 lacs of business transaction take place every day.
- They will lose all the investment if the market not been continued. They can't access to the other fish market nearby as each fish market is run by different management. If the GOB doesn't provide alternate place around this place, then they will have to stop their business. They don't know about other business so they will ultimately be jobless.
- They request for a jetty placed just in front of the current location and that will help them to continue their business as usual.
- The current market price is 2 lakhs/ 7 decimal.

11/185 Mr. I, Dakshin Medinimandal

- He is a truck driver and usually carries fish for the different markets in Dhaka. He has been living near the fish market which will be acquired and he wants a plot in the resettlement site.
- He also requests to keep this fish market which is the biggest in Munshiganj district.

12/185 Mr. J, Dakshin Medinimandal

- He has been living here for 35 years. He bought land from some Hindu families who went back to India during the 1971 independence war. He hasn't been provided any documents from those families which can prove his ownership.
- As there is no document of ownership, he hasn't given any tax related to land record.
- At least 100 houses like his live in this area.
- He demands for adequate compensation or a plot in the resettlement site.

13/186 Mr. K said that

- He has been doing timber business for 13 years near Mawa Ferry Ghat and rent this place.
- He demands for compensation for the structure, equipment and undue payment from customer. If there is no saw mill over there, then he will not get any undue payment.
- He has also debt in the bank.

14/186 Dr. L, Dakshin Medinimandal

- He is the owner of pharmacy near Mawa Ferry Ghat. He thinks that the shop owner and shopkeeper will be unemployed due to acquisition of shops near mawa ghat and they don't have skill of doing other business.
- He demands for market place near the bridge and rehabilitate all the shops over there.
- Harassment and delays of getting compensation should be taken care of.

14/186 Ms. M and N, Dakshin Medinimandal

- In this area land price is so high that they will not be able to buy land with the amount of compensation money.
- They don't want other AP's from other village in the same resettlement site.
- They want to move in a group in the resettlement site to maintain the community bond.
- The payment of compensation through the bank account is preferable as there will be less chance of harassment.

15/187 Mr. O, Dakshin Medinimandal

- He is selling pre-paid cards for the mobile. There are around 1,000 shops near the Mawa Ferry Ghat. Most of shopkeepers will be unemployed as they will not get convenient place to replace the markets.
- He demands for market place near the bridge and rehabilitate all the shops over there otherwise they will not maintain their livelihood as they don't have skills of doing other occupation.

16/189/708 Mr. P, Dakshin Medinimandal

- He is the owner of 100 decimals land of Mawa Ferry Ghat market. He gets around 40,000-50,000 taka from the rent of the shop.
- He will move from here after getting adequate compensation. He demands for market rate as compensation of land.
- He is worried about losing community bond as they have to move from here.

17/Kandipara Mr. Q

- He has one troller which is carrying passenger to cross the river and it is only his earning source.
- Adequate compensation is demanded for the loss of income.
- GOB should be given more attention for the livelihood restoration of the AP's, because those who are living near the riverside are very poor and they can't continue their livelihood if they are not assisted and compensated.

18/192/795 Mr. R and S, Dakshin Medinimandal

- They don't want to stay in resettlement site because in that proposed site the size of plot for individual AP is very small as compared to where they live now.
- They have shops in Mawa Ferry Ghat and which are under proposed acquisition map.
- They demand for adequate compensation for the land, structures, trees and shops.

19/195 Mr. T, Uttar Kumarbhog

- He is the owner of garden which is under proposed land acquisition boundary.

- He demands for adequate compensation of the loss of trees.

20/196 Mr. U, Uttar Kumarbhog

- He will lose his land on which he lives because it would be under proposed Toll Plaza. Apart from that, he will also lost land for cultivation and dairy farm due to acquisition for proposed resettlement site.
- These are his source of income and he is worried about his future source of income.
- The size of the plot for individual AP's in the resettlement site will not be adequate for cultivation and replace dairy farm. At least 20 decimals of land is required for individual AP's.
- He doesn't want to stay with floating people within the same resettlement site. He requests to GOB to give government free land to the floating people.
- If the GOB will not provide sufficient land for resettlement site then in extreme case he will have to move 10 km away towards east from where he lives now. That land is low land and it needs to be filled to make it inhabitable and he demands for GOB assistance to fill the land if it will necessary.

21/198 Mr. V, Uttar Kumarbhog

- He is buying and selling old cloths and his business will not be affected by acquisition of land. However, his house and land will be under the acquisition boundary. He demands for plot in the resettlement site and wants to move in a group.
- He also demands for separate resettlement site for the floating people.

22/200 Mr. W, Uttar Kumarbhog

- He is worried whether he will get adequate compensation or not for the loss of land where he lives and also cultivation land. He thinks that the land compensation rate will be much less than the current market price.
- For the acquisition of land, there will be a chance of loosing community bond.

- He demands for extension of resettlement site towards the eastern direction as the proposed land will not be adequate to meet their demand of same size of plot as they live now. The village people normally live in a wider space whereas in the resettlement will be so narrow that they couldn't afford to stay there.
- He demands for monitoring team from the donor agencies at the time of the compensation payment procedure so that everything will be transparent and fare and this will reduce the chance of harassment and delays by 90%.

23/201 Mrs. X, Uttar Kumarbhog,

- She demands land for land as per compensation.
- She also demands for extension of resettlement site. There will be most likely chance of losing community bond as many people will not be accommodated in the proposed resettlement site.

24/202 Mrs. Y, Uttar Kumarbhog, female headed family,

- She is worried whether he will get adequate compensation or not for the loss of land where he lives now. She demands for adequate compensation and door to door compensation service.
- She is not interested for plot in the resettlement site and will manage some other place to stay after getting adequate compensation.

25/203 Mr. Z, Uttar Kumarbhog

- He demands for compensation as per current market price which is 1 lacs/decimal.
- He also demands plot in the resettlement site which should be not less than 14 decimals and it should be properly developed by filling soil.

26/204 Mr. A', Uttar Kumarbhog

- He has a shop in near Mawa Roundabout and agricultural land around his house which is under land acquisition boundary.

- He wants compensation as per current market rate. After getting compensation, he will decide whether he will buy land by himself or move into the proposed resettlement site.

27/205 Mrs. B', Uttar Kumarbhog

- She wants compensation as per current market rate. After getting compensation, she will buy land by herself and move into that place.

28/207/1414 Mr. C', Uttar Kumarbhog

- He wants to move in the resettlement site and will move to that place in a group. He is also worried about the breaking community bond.
- He demands for separate resettlement site for permanent and non-permanent residents as there will be possibility of no adjustment.

29/208 Mr. D', Uttar Kumarbhog

- His income source is mainly from agricultural production and pension.
- He demands for plot in the resettlement site and at least 20 decimals of plot size for individual AP.
- He requests that Bangladesh Bridge Authority people can take the initiation to pay the compensation through some convenient places near each village so that the APs can easily access to that places.

30/209 Mr. E', Uttar Kumarbhog

- He will lose his whole land due to acquisition for constructing embankment and developing resettlement site.
- At least 30 decimals of plot are needed to accommodate his family in the resettlement site.
- The current market price is 2 lacs taka/ 7 decimals.

32/211 Mr. F', Kandirpara

- He demands either land compensation as per current market price or land for land.

- He doesn't want to move to resettlement site as the plot size will be less likely the same as where he lives now.
- He has been informed that he will also get adequate compensation for trees and fish as well.
- He strongly opposes of against payment procedure through DC office or local member or chairman. Whereas, he is fully in favor of getting compensation from bank.

32/211 Mr. H', Kandirpara

- In this village, 70% of them are farmer and 30% of them have agricultural land.
- The current market price is high which is about 20,000 taka/decimal (high land).
- He will move to resettlement site if the plot size is at least 14 decimals. Otherwise, it will be difficult for them to stay with his entire family members.
- He opposes the extension of proposed resettlement site which will reduce more agricultural land of his own.
- He is also concerned about the harassment and delay from DC office of getting compensation. There will be no chance of harassment if he gets compensation through his bank account.

32/211 Mr. I', Kandirpara

- He demands for plot in the resettlement site as he will not be able to buy land by himself.
- He wants to move in the resettlement site and will move to that place in a group. He is also worried about the breaking community bond.
- He also demands for the extension of proposed resettlement site as it is less likely to be accommodated the APs, who are willing to go to the resettlement site.

32/211 Mr. J', Kandirpara

- He fears of expenditure of all his compensation money not in buying new land but other purpose. So, he demands for land for land as compensation.

- He proposes to use the char land as a part of embankment so that, less inhabitable land will need to be acquired for river training purpose.

33/212 Mrs. K', Kadirpara

- She demands for at least 10 decimals of plot in the proposed resettlement site.
- Their family need to do mutation as the land is recorded in her grand father's name. According to her statement, mutation process takes about 3 months whereas it should be not more than 21 days. She is also worried about the unfair dealings of the local AC land office to do the process.
- She strongly opposes against giving plots of the non-resident people to the same resettlement site.
- Compensation payment should be given to their hand directly not through union chairman or member.

34/213 Mrs. L', Zashaldia

- She demands for land compensation as per market rate.
- She will move to Haldia (her relatives live there) after getting compensation.
- Her husband rent a shop in the market and sells vegetables which is their only earning source. The rent of the shop is 150 taka/ month, whereas, the rent of the shop in the Haldia bazaar is 500 taka/month.
- She wants compensation directly to her hand not through village leader.

35/214 Mrs. M', Zashaldia

- She is the only earning member of her family.
- She demands for both cash compensation for land and also 7 decimals of plot size in the resettlement site.

35/215 Mr. N', Zashaldia Bazaar

- He rent one of the shops in the Zashaldia Bazaar and he has vegetable shop.
- He demands for new bazaar place to be constructed by the GOB and rehabilitate the shopkeepers over there on a priority basis otherwise, he will lost his income

source. He proposes one potential place which is 500 m in the northern side from the current location.

36/217 Mr. O', Zashaldia

- He demands for adequate cash compensation so that he can buy new land near to the current place.
- The current land price is high which is categorized as high land: 1 decimal = 1 lacs taka and low land: 7 decimals = 1 lacs taka.
- Low land can't be used to build the structure because it will be under flood for 6 months of a year. In order to make it inhabitable, 10-12 feet of land filling is needed which takes about 3 lacs/ 7 decimals of land. It will be impossible for individual person to do the land filling if GOB doesn't provide assistance.
- In this village, very few people want to go to the resettlement site as the living condition will not be suited for them.
- Payment procedure of the compensation should be direct and it should not be via union chairman or member.
- Due to relocation of some people, there will be no significant affect of decreasing number of students in the school considering good road networks within villages.

37/218 Mr. P', Kandirpara

- He demands for alteration of proposed resettlement site as the site is highly productive for crop production compared to his proposed site. GOB can acquire the same size of resettlement site over there.
- He is worried about his livelihood restoration as he will lose his agricultural land due to acquisition for resettlement site.
- He came to know from his relatives that the facilities provided in the resettlement site in case of Dhalessori Bridge Project were not proved adequate. That's why, his relatives has to move another place. He questioned whether the same case will be happened in case of Padma Bridge Project.

- He proposes a technical option whether it is appropriate to build embankment on the river by filling it through dredging so that the existing village needs not be acquired or not. He argues that the dredging cost will be much lower than the total amount of compensated money for affected trees.

38/219 Mr. Q', Kandirpara

- He is a day labor and cultivating other farming lands.
- He demands for at least 14 decimals of plot in the resettlement site.
- If it is not possible to provide him plot in the resettlement site then he will have to provide 4 lacs taka for purchasing new land and construction of house.
- Trees around his house are their supplementary food source and it takes time in the new site to grow up trees and productive.
- Compensation should be given directly to his hand or through his bank account.

39/220 Mr. R', Kandirpara

- He is doing poultry business in Mawa Bazaar. His business will not be affected due to construction of the bridge.
- He doesn't want to go to resettlement site because it will very likely small plot.
- If he doesn't get compensation for land as per market price then he will not be able to stay with his other family members within the same area.
- He anticipates that there will be every possibility of breaking community bond.

40/221 Mr. S', Kandirpara

- He works as a supervisor in a privately owned bus company.
- He demands for cash compensation for his land which is around 4 lacs taka. If he can't buy land immediately after getting compensation then he will rent houses to stay nearby.
- He doesn't want to move in the resettlement site.
- He wants to move in a group with his neighbors.

- If GOB provides assistance for land filling of the low land of the other side of the road then they will move in a group and stay over there by purchasing this low land.
- He wants direct compensation as there will be every chance of harassment from DC office.

41-42/222 Mr. T', Zashaldia 2

- There is about 60% of non-permanent residents live in this ward. The permanent residents don't want them to stay within the same resettlement site.
- He proposes that the non-permanent residents need to be relocated their original site (other side of the river). They were mostly affected from river erosion and now the char rose up so, they can move their original places.
- 70% of the people are farmers here and their earning source from "Chalk" which may be taken as resettlement site which will definitely affect their livelihood.
- He also proposes to develop resettlement site ward by ward basis because there will be less amount of "Chalk" is needed (only 5-7 acre) and they can maintain their livelihood on agriculture. There will be less likely of having social conflict as people will move to the resettlement site in their own ward restoring the same harmony.

43/223 Mr. U', Zashaldia 2

- He prefers adequate cash compensation instead of getting plot in the resettlement site.
- He can manage his resettlement but the constraint is the scarcity of purchasable land.

44/224 Mrs. V', Zashaldia 2

- She rent the place and her husband is a day labor working on others farm land.
- She demands cash compensation for re-construction of her structure to a new place.

- 200 people of this ward like her have the same status.

45/226 Mr. W', Zashaldia 2

- He demands adequate cash compensation for buying new land in order to re-construct his houses.
- He can go another ward and don't mind of breaking community bond.
- Cash compensation should be paid directly to the individual AP or through the bank account.

46/227 Mr. X', Zashaldia 2

- He is doing handicrafts business within in the same plot where he lives now.
- He demands for either sufficient plot size in the resettlement are so that he can continue his business or market rate of land price so that he can buy the same amount of land and continue his livelihood.
- He doesn't mind to stay with non-permanent residents because he argues that if they can live now, why it will not be later?

47/228 Mrs. Y', Zashaldia 1

- Considering the fact that the land price of the other side of the road is twice as much compared to riverside, she demands adequate cash compensation for the land.
- 75% of the people in this ward don't want to go resettlement site as there will be very small plot to be allocated as compared to their existing plot.

48/229 Mr. Z', Zashaldia 1

- He is doing business related to kitchen tools.
- He prefers cash compensation for land which should be in accordance of market price. Otherwise, at least 18 decimals of plot should be provided to him in the resettlement site.
- The compensation payment procedure should be either directly to the APs in cash or through bank account.

- He doesn't mind of losing community bond due to relocation of their neighbor.

49/230 Mr. a, Zashaldia 1

- He has two shops in the Zashaldia Bazaar which will be acquired for river training purpose. He has also some land in Kolapara area which is low that he can't build structure over there.
- He demands for cash compensation for land which should be equal to the current market price.
- He doesn't want to go to the resettlement site as the plot size is very small.
- He also wants that the bazaar should be re-constructed to a new place nearby and should be provided compensation to the shop owner to build their shops to the newly placed bazaar.

50/231 Mrs. b, Zashaldia 1

- Her husband is the only earning member of the family who is doing business related to lead machine works.
- She demands for current market land price as a part of land compensation.
- After getting compensation, she wants to buy land within the same village and moves in a group.
- She doesn't want to go to the resettlement site as the living condition would not be good compared to current living condition.
- She is concerned about the future generations because they will have to live in small space as compared to now and also losing the gifts of nature from the trees around.

51/233 Mr. c, Zashaldia 1

- He is doing business related to aluminum in Chittagong.
- He demands land for land as a part of compensation. If it is not possible to provide land then he will request for cash compensation in accordance to current market price. The cash should be paid at once not in terms of installment payment.

- Compensation should also be included the land filling price. Otherwise, GOB can provide assistance for land filling for a group movement who will buy large amount of lands in any place nearby. He also proposes one potential area of their movement which is the northern side of Kobutorkhola Graveyard.
- GOB can initiate a land act that allows the APs to buy lands at reasonable price by preventing the land seller to take the opportunity of high demand of land.
- He argues that people in this village don't want to go to the resettlement site because of sharing of latrines, tube wells etc.
- GOB needs to categorize the resettlement site in terms of social status.

52-53/235 Mr. d, Kobutorkhola Bazaar

- There are 126 shops in the Kobutorkhola Bazaar and in an average 5 people are working in each shop.
- New bazaar needs to be developed nearby and also demands for cash compensation for rebuilding the structure.
- Average monthly income should be provided as compensation to the APs who are actually rent the shops in the bazaar during the period of building new bazaar.

54/237 Mr. e, Uttar Kumarbhog

- He works as a day labor in others agricultural land.
- The amount of compensation should be as much as current market price of land.
- After getting compensation, he will decide of his next destination. Most likely, he will move to the other side of the road which connects the "Mawa Ghat".
- He wants to move in a group to new place in order to maintain the same community bond.
- The compensation payment procedure should be carried out by door to door service to individual AP. He opines that it will be convenient for them and also the procedure reduces the chance of any kind of harassment.

55/239 Mrs. f, Uttar Kumarbhog

- She is the only earning member of her family and she was greatly affected from the erosion of the river and she lost her land and houses completely during this process.
- She has been the current place for 8years by giving rent of 1,200 taka/year.
- She requests to the GOB to provide her at least 7 decimal of lands in the free land so that she can stay there and continue her livelihood in the same way as it is now.

56/240 Mrs. g, Uttar Kumarbhog

- Her land and houses was broken into river as part of river erosion. Now, she lives another place by giving rent which is also under the proposed acquisition area.
- Her husband works as a day labor and the occupation will not be affected due to acquisition of land.
- As she has no place to go, she requests for plot in the government owned free land or in the proposed resettlement site.
- She has no objection of staying with the permanent residents in the resettlement site.
- Cash compensation should be paid to the APs directly by given responsibility to distribute it through bridge implementing agency.

57/242 Mrs. h, Uttar Kumarbhog

- She has to rent this place for 250 taka/ year as her original land has been eroded by the river.
- Her husband profession is chef and he can continue his job even after they have to move this place.
- As she has no place to live, she demands for plot in the resettlement site within the same village. Otherwise, she has to rent the same amount land with higher rent in other area within this village.
- She wants to move in a group in order to restore their community bond.

58/243 Mr. i, Uttar Kumarbhog

- His original land has been eroded by river. Now, he has to rent this place for 3,000 taka/ year to live.
- He has been under agreement with landowner for one year starting from October, 2007. If he has to move in between this period, he will not get the remaining amount of money. So, he requests GOB to consider this situation and provides him the adequate compensation.

59/ 244 Mr. j, Uttar Kumarbhog

- His sons are the only earning member of his family and they sell eggs in Mawa Ferry Ghat and Chandrabari Bazaar. Their occupation will definitely be affected by the construction of bridge as there will be no ferry ghat during and after construction of bridge. He requests the government to employ his two sons in the bridge construction. Otherwise, the extreme consequence is to go to Dhaka for maintaining their livelihood.
- He demands for cash compensation for moving the structures to a newly place.

60/245 Mr. k, Uttar Kumarbhog

- His original land has been eroded by the river and now he has to stay on others property by giving rent for the place.
- He has no other place to go so that he requests to the government for either plot in the government free land or cash compensation in order to buy land.

61/246 Mr. l, Uttar Kumarbhog

- He rent this place for both living and cultivating purposes as his original property has been destroyed due to river erosion.
- Free land of government can be provided to this type of APs so that they can maintain their livelihood in a better way.

02/253 Mr. m, Naodoba

- If the donor agencies come forward to force the GOB to provide land compensation rate as per current market rate, then they will certainly get the adequate compensation.
- He also argues of getting involvement of external and internal monitoring team during the payment procedure.

02/253 Mr. n, Naodoba

- Normally, they registered land price at low rate whereas, the actual price of the land is much higher. They do this because of avoiding high registration fees which is 20,000 taka/33 decimals for the registered land price of 90,000 taka/33 decimals.
- If the land compensation rate does not match with the market price, then they will demand land for land as compensation instead of cash compensation.

02/253 Mr. o, Naodoba

- The current market price varies from 1 lac to 4 lacs taka depending on the class of land. Government should consider this categorization of land while assessing compensation rate.
- The compensation should be paid in cash and handover to APs directly. However, compensation payment through bank account may not be efficient as only 1-2% people of this village have bank account. Moreover, people will less likely in favor of the option due to the process of opening new account is time consuming and it takes 500 taka as deposit money which is quite expensive as most of the people are poor.
- Delay the process of payment compensation may affect the compensation rate as the current market rate is always changing.

02/253 Mr. p, Naodoba

- He demands for constructing toll plaza in Zanjira union instead of Shibchar union. In favor of his point, he argues that it will open more employment opportunities in this union as this union is more affected than Shibchar union.

69/255 Mr. q, Diara Naodoba

- His land has been eroded by river and that's why he rent this place to stay.
- He demands for either cash compensation or plot in the resettlement site.

69/255 Mr. r, Diara Naodoba

- Around 40 bighas of cultivable land of his, is going to be acquired for the purpose of approach road.
- The current market rate is around 1.5 lacs/bigha and he demands compensation in accordance to that rate.
- Bank cheque would be a convenient option for them as a part of the compensation payment procedure.

70-71/258 Mr. s, Diara Naodoba

- His about 15 bighas of land is going to be acquired in connection for approach road.
- The government fixed rate and current market rate is same here which is 70-80 thousand taka/bigha depending on the class of the land.
- Those people who lost both houses and agricultural land, they will most likely to move in urban area and don't want to go in the resettlement site.
- The land price will go up around 3 times than the current market price after construction of bridges and approach road. The APs will not get the benefit of development induced high price of land. In the process of compensation assessment, the government should consider this fact.
- Land compensation through bank account is a very good option considering no harassment of APs.

72/260 Mr. t, Painpara

- His major portion of land has been eroded by the river.
- As there has been river erosion going on, normally, no land is sold here.

- Cash compensation should be paid directly not via from village leader or union chairman. Bank cheque is also a good option from his view.

73/261 Mr. u, Diara Naodoba

- The current market rate is 1.5-2 lacs/bigha and he demands for market price rate as a land compensation rate. Otherwise, to buy a new land is very difficult as land price will be high.
- The rent of the house will also be high during land acquisition phase as the demand for renting house will rise up suddenly.
- Compensation payment can be done easily through transfer of money to AP's bank account.

73/261 Mr. v, Diara Naodoba

- Compensation should be paid by showing land deeds only instead of showing both deeds and mutation documents. The mutation process is time consuming and it is also source of harassment for the poor people to do. He is also fear of having difficulties in the process of mutation as more cases are in the queue.

73/263 Mr. w, Char Chandra

- The current market rate is around 3.5 lacs/bigha and he demands for same amount of rate for land compensation.
- Temporary offices need to be setup in every union for effective distribution of compensation.

74/264 Mr. x, Char Chandra

- He rent this place as his own land has been eroded.
- He demands compensation adequate for breaking and re-building the structures which around 7-8 thousand taka including 200 taka labor cost per day per person.
- It will be difficult to rent same size of land elsewhere as the rent would be 4 times than the current place.

75/265 Mr. y, Char Chandra

- The current market price is 1.5 lacs/bigha near river side and 2-3 lacs/bigha in the more towards southern side. He demands for market rate as land compensation rate.
- After getting compensation, he will decide where he can move.

76/266 Mr. z, Char Chandra

- 8 bighas of land has been under the proposed land acquisition for embankment construction and he has no land without these.
- The market rate is 2.5-3 lacs/bigha and the government rate is 1 lac 35 thousand taka/bigha. They will not buy new land with the amount of 1.5 times government rate.
- There are lands available for buying new lands.
- The compensation should be paid directly to them through some convenient places near each union.

77/266 Mr. a'

- He has shop which is his only earning source. He can continue his business by buying new land elsewhere within this village.
- The amount compensation should be so that he can buy almost same amount of land as he has now.
- He can't move his shop to near proposed approach road side because the road is in another district where he has no community bond.

78/267 Mr. b', Kathalbari Ferry Ghat

- He is the owner of 16 bighas of land and his main income source is from the rent of shops near ferry ghat.
- The current market rate is 5-6 lacs/bigha and he demands for this rate for land compensation.

- There are around 2-3 thousand people is currently employed in this ghat work as shopkeepers, hawkers etc. if the ghat is not there during and after construction of embankment, there will be no such employment here.
- If the shopkeepers get enough compensation and the government extends and increases facilities in different ghat and bazaar, then the shopkeepers can move to Munshi hat, Kutubpur hat or Bangla Bazaar.
- “Tashil office” is the main source of harassment for APs. Some of them don’t know about the mutation process and the officials of this office take this opportunity to force APs to give them bribery.
- There are some cases where land record has been recorded to other person name not the actual land owner.

79/268 Mr. c', Kathalbari Ferry Ghat

- The least government fixed rate is 1 lacs 95 thousand taka/bigha, whereas, the current market price is 5-8 lacs taka/bigha. He demands land compensation as per market rate.
- Regarding the compensation payment procedure, payment through bank account is not a good option as most of them has no bank account but through bearable cheque could be an option. Whatever be the case, the compensation should be paid directly not via village leader or union chairman because, most of the time, poor people loose almost half of compensation money if it is through them.

81/270 Mr. d', Bagia

- He is the owner of 5 bighas of land which is going to be acquired for embankment construction.
- He is doing poultry and sand business with in his plot of land which is his only earning source.
- Here the current market price is 8 lacs/bigha whereas least government fixed rate is 2.4 lacs-3.4 lacs depending on the class of land. He demands for compensation as per market rate otherwise, he can't buy land in bangle bazaar area where the land price is 10 lacs/bigha.

- There is every possibility of loosing community bond as APs in this vicinity area will not move in the same place due to unavailability of enough land in the same area.

82/273 Mr. e', Bagia

- He is the owner of 2 acre 26 decimals of land where the market price is around 10-12 lacs/bigha depending upon the class of land. Here the least government fixed rate is 2 lacs 52 thousand taka/bigha. He demands land compensation as per market rate.
- He had the bad experience of not getting compensation for acquired land from government in order to construct connecting road when the ferry ghat was in Boro Kasobpur.

83/274 Mr. f, Bagia

- 49 decimals of his land is going to be acquired. The current market price is 8-12 lacs depending to the class of land. As there is scarcity of land, the land price is rising very rapidly. It would be very difficult for them to buy new lands with the 1.5 times least government fixed rate so, he demands current market rate as a land compensation rate.
- The compensation payment procedure should be directly to the APs through bank cheque.

84/275 Mrs. g', Boro Kasobpur

- She has to rent this place because her original land has been eroded by Padma River.
- Her husband is a day labor and their main source of income is from daily wage and occasional selling of fruits.
- She demands cash compensation for structures and trees and the compensation should be paid directly to her not to through land owner.

85/276 Mr. h', Boro Kasobpur

- He has 3 bighas of land which is going to be acquired for the purpose of embankment construction.
- He thinks that low registered price for land record in order to avoid high registration fees may affect them as compensation will pay according to the registered sales figure.
- They don't know about the mutation process and he requests government to help them understand through free consultation program.
- He wants to go to the resettlement site within his village and in respect to that he proposes a resettlement site of about 5-6 bighas nearby. If is not possible then they demand for cash compensation for land by which they can buy new land at least equal to 80% of current land area.

86/279 Mr. i', West Naodoba

- The current market price is 3 lacs taka/bigha where as the government least registration fixed rate is 1 lacs 7 thousand taka. If the amount of compensation for land is based on the least registration price, then they will not be able to buy new lands for stay within the same village.
- While considering the compensation for crops, government should consider that two different types of crops have been produced in one year.

86/279 Mr. j', West Naodoba

- The compensation should be 5 lacs/bigha for homestead land. Otherwise, they will not be able to buy land as much as they need for constructing structures.
- The labor cost is increasing day by day and the government should consider this situation while assessing the compensation for breaking and re-building the structures.

86/279 Mr. k', West Naodoba

- They want to move in a group to a new place in order to restore their community bond.

86/279 Mr. l', West Naodoba

- Compensation should be paid directly to APs or through temporary established local offices, but not through village leader or union chairman. In this regard, they had bad experiences during relief distribution of 1998 and 2007 flooding time.

87/280 Mr. m', Kutubpur

- Normally, upland is used for houses and the market rate for that is 4 lacs/bigha. The compensation money should be equal to the market rate
- They will move according to their convenient places after getting that amount of money.

88/281 Mr. n', Boro Kasobpur

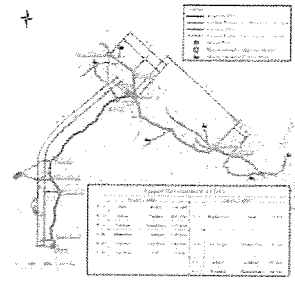
- The current market rate for homestead land is 4 lacs/bigha and he demands compensation for land according to that price.
- He demands cash compensation for land, structures and trees and the compensation should be paid directly to him not to through land owner. Bank payee cheque could be another option to be considered.
- He doesn't know about the mutation process and he requests government to help them understand through free consultation program.

3. JICA進捗報告会資料

**Augmented Deliberation
for Building Safeguard Policies
in Infrastructure Development**

Masahide Horita
Department of Civil Engineering
University of Tokyo
Japan

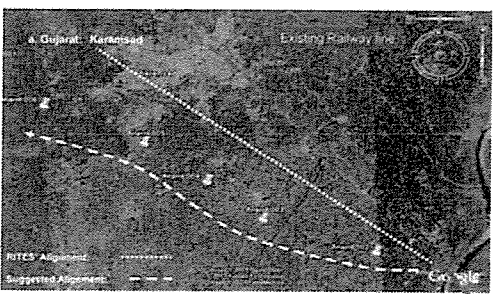
**Project scope of Dedicated
Freight Corridor, India**




- 2700km in length
- 26 detours
- 31 junctions/t/ni
- 2111 households affected
- How to make it work?

(Source: JICA Study Team – & all thereafter)

Macro- vs microscopic view



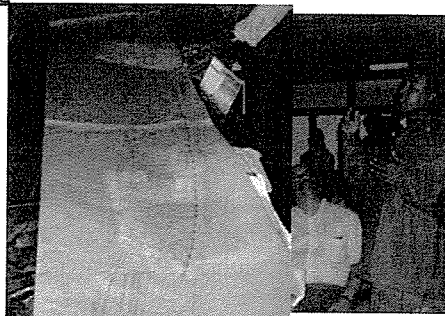
Macro- vs microscopic view



**Macro- vs microplans: extracts from
a stakeholders meeting (DFC)**

- What will be the benefits of this project?
- When will this project start ?
- How is it going to add to the global warming?
- What will be the adverse effect on the Truck Operators?
- Will there be hazardous effect?
- How will the Government compensate to the owners and the affected persons?
- Will women and the rural people be affected by the DFC Project?
- JICA is a foreign company. Will it affect the Indian Company?

**Macro- vs microplans:
SHM in the village level (Padma)**



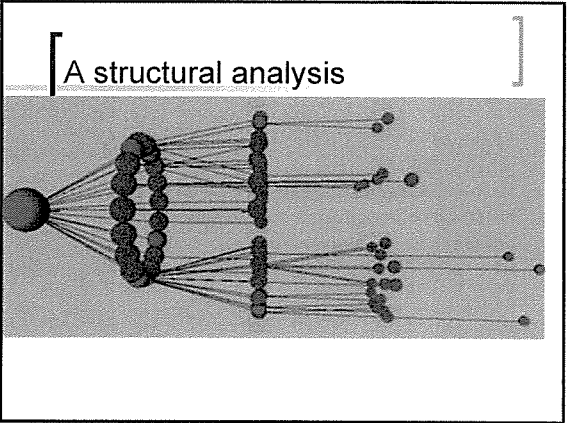
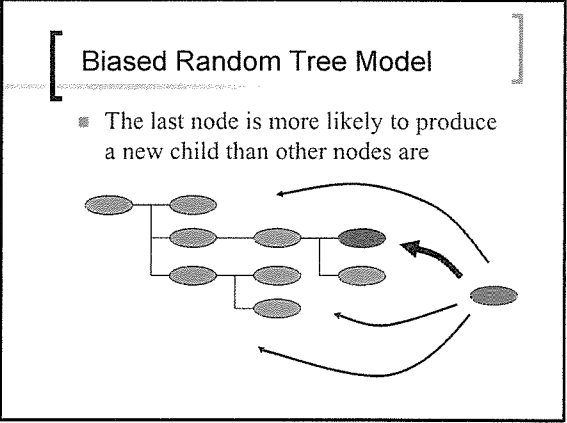
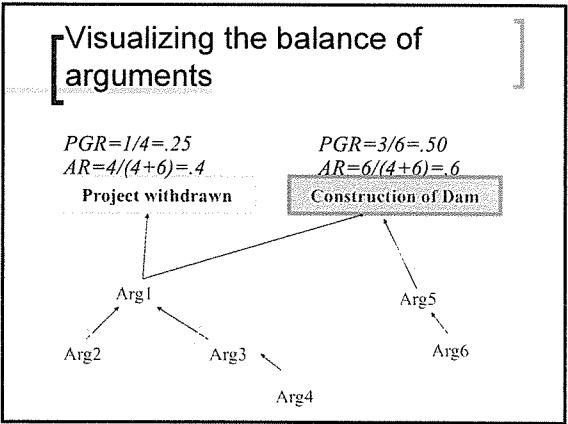
CRANES:
 a public medium for deliberation

Coordinator for
 Rational
 Arguments through
 NEsted
 Substantiation

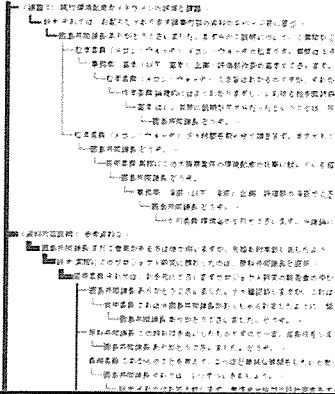
- Main objectives**
1. Visualize the structure of arguments
 2. Find out *where* the issue lies
 3. Create the arguments *that would be*
 4. Augment the quality of deliberation

**Categorization of Arguments:
 Kawabe River Dam**

- We need Kawabe River Dam
 - There are many floods in Kuma River.
 - The land shape magnifies the risk of a flood.
 - It is not unusual that the rainfall exceeds 2700mm.
 - The water level was 50mm higher than the bank in '57 Flood.
 - Ichifusa Dam can only manage 400t per sec.
 - The dam reduces the flooding risk of the whole basin.
 - Floods ought to be tackled through alternative measures.
 - It is even more dangerous to rely on dams only.
 - A big flood gives even worse damages with a dam than without.
 - Alternative measures do not satisfy the required safety level.
 - We should prepare a basin plan against those floods which take place once 80 year.
 - To produce the same effect by the reinforcement of a bank, another 3.5m in height is needed.



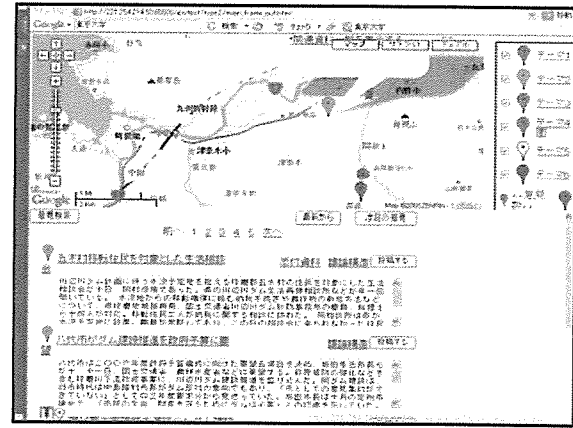
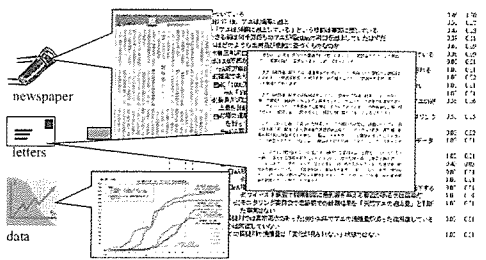
The 'Flow' of Arguments on JICA ESC Guidelines



Application to JICA Committee

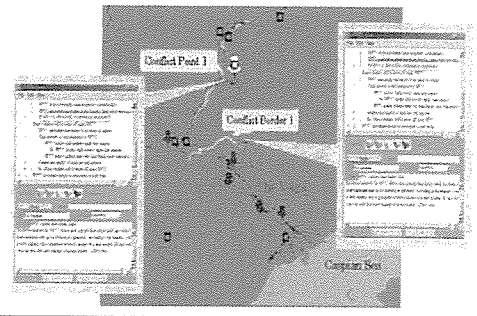


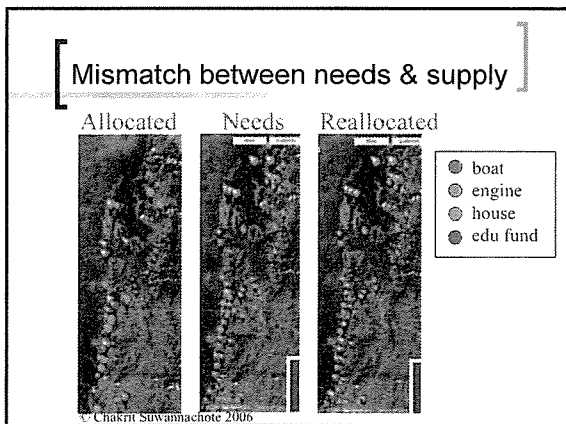
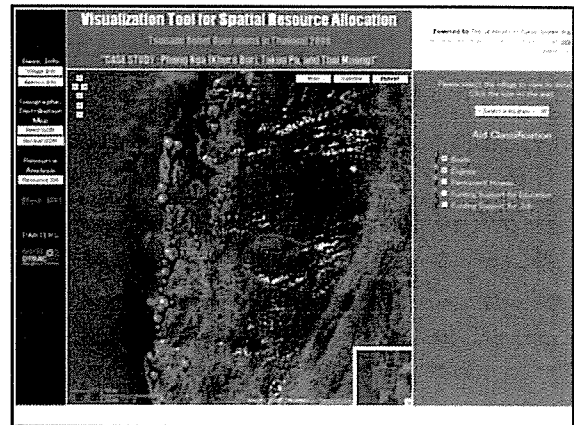
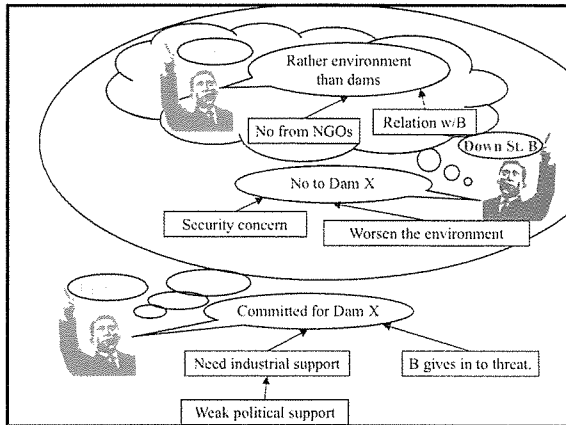
Reconstructing policy discourse with fragmented media coverage



Possible Extension

Conflict Management for Transboundary Infrastructure





- Application to infrastructure projects in South Asia**
- Dedicated Freight Corridor, India
 - Padma Bridge, Bangladesh
 - West Bank Bypass Design, Pakistan

- Application to DFC**
- Dedicated Freight Corridor, India
 - Correct records meeting of all affected areas
 - Construct & plot argument trees onto a geographical map
 - Analyze clusters, distribution & linkage of critical issues
 - Bridging the gap between macro- and microscopic surveys
 - Use the map as 'memoranda' for the later stage such as D/D, micro-plan & rehabilitation
 - Propose implementation framework for safeguard policies

CRANES研究開発 進捗報告会

東京大学 堀田昌英
2007年9月7日

現地調査の概要

- 2007年5月8日～7月6日インド国に滞在
- 対象：幹線貨物鉄道輸送力強化計画調査 (DFC)
- 調査地域：DFC沿線の被影響村落
西回廊：Delhi～Mumbai
東回廊：Mughal Sarai～Phagwara
- 調査内容：
現況調査, SHM, 関係機関・被影響世帯
聞き取り調査, 議論の可視化・構造化 2

ステークホルダー協議

- 西回廊：Rewari, Palanpur, Unja, Kheda, Palghar
- 東回廊：Tughlakabad, Dadri
- 被影響住民の土地収用・住民移転に対する懸念・反対は極めて強い。
- 過去の公共／公益事業における経験から
- 議論自体は極めて活発

Feedback Meeting/村落調査

- DFCに関する情報伝達の村落較差
- SHMとの連携がうまくとれている村落も多い
- 第3回SHMでFeedbackが機能するかどうか
が重要
- 村落レベルでは特にLAP/RAPの詳細に
関心が集中
- 過去の収用の経験(訴訟など)を聞くため
には不可欠

論点①土地収用と移転補償

- 補償算定規準となるCircle Rate(公示価格)
が市場価格と乖離
 - 例) Dhanpura, Ahmedabad
補償費Rs 16,000 for 農地2254m²
⇔市場価格Rs 400,000～500,000 (?)
- 事業者→州政府→District Collectorに委任
相手の顔が見えない補償プロセス
- 希薄な事業者の当事者意識
- Entitlementに関する住民の不安

論点①土地収用と移転補償(続き)

- 腹付け区間：都市部移転住民の反対
- 迂回路：農地地権者の反対
- 成長が著しい都市では迂回路用地に向かっ
て地価高騰の波が押し寄せている
- 替地補償か金銭補償か
- 補償額に不満の場合→District Collector
Land Acquisition ProcedureもしくはCivil
Court (ただしどちらも機能不全)
- Grievance Redressal Cellが機能するか?

【論点②住民移転計画】

- DFC調査団は移転を最小化するアプローチ
- 雇用確保に対する要望
- 地域に限定的な便益が少ない→地域対策？
- 移転地を住民が指定するケースが多数
But: FSのRAFでは明示的記述が困難
- 非正規住民のR&R→鉄道省が納得するか？
- 小作農等BPL層の対策は実績多
- D/D段階でのRAP策定への橋渡しが重要
→Local NGOの知見が蓄積されるかどうか

【論点③生活環境】

- 踏切による交通遮断
→Rail Over Bridge, Rail Under Bridge, 信号etc
- 安全, 騒音・振動
→防音壁, 防護柵
but 賛否両論
- 用排水路網の確保, カルバートの設置
- 樹木伐採, 森林保護
- 建設時の影響

【住民参加「プロセス」の課題】

- 広大な被影響地域, 多数の被影響世帯
- 重層化された調査組織
縦の意思疎通, 横の情報共有
- 時間管理
- 決まらない計画細部
(路線線形, ROW範囲, ROB, etc)
- 情報公開の範囲: 意思形成過程情報？
- 鉄道省/DFCCIL(事業者)の主体性・継続性
(環境社会配慮のインディ法的根拠は？)
- 「日本人」の役割

【住民の懸念抽出における問題】

- 意見の断片化
- 議論の全体像を把握することが難しい
- 個々の議事録を読むとどれも同じように見える
- 地理的な文脈, 分布を理解することが難しい
- 他の場所でどんな議論がされているか分からない
- 地図表示, 類型化, ツリー化へ

【CRANES: a public medium for deliberation】

Coordinator for
Rational
Arguments through
Nested
Substantiation

【CRANESテストデータ構築】

- SHM議事録を収集
- 各発言を内容によって類型化
- 各発言をVillage毎に分類
- 各発言を地図上にプロット
- 各発言を統合し, 議論ツリー化
(「みなし議論」の構築)
→demonstration

〔CRANES適用の利点

- 各発言をつなげることで(本来起こりえた)議論の深度と広がり生まれる
- 「住民意見の全体像」を示すことが可能(相手国政府, 国内関係機関)
- 環境社会配慮調査の品質管理
- プロジェクトサイクルを通じた情報共有

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〔CRANES開発・適用の課題

- 技術移転
 - 地理情報・設計図面などの電子化
 - 情報ツールの使用環境, スキル, 主体
- 時間的・空間的スケールとの関係
- 計画・意思決定への反映
- 技術的課題
 - 類型化・ツリー化の自動化技術
 - ユーザーインターフェイス
 - 住民意見以外の情報の活用方法

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〔EMP/LAP/RAP策定への課題

- 数々のPAPsの懸念を解消する計画とは
 - 補償費算定基準
 - 決定・支払手続(Local Committee)
 - 異議申立機関, 仲裁機関
 - インベントリ, Microplan策定, モニタリング
- インド政府との合意形成・交渉!
 - JICAガイドライン, Railway Act, NRP2006
 - EWG ×
 - 次段階への橋渡し・JBIC他との連携

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**CRANES研究開発
進捗報告会**

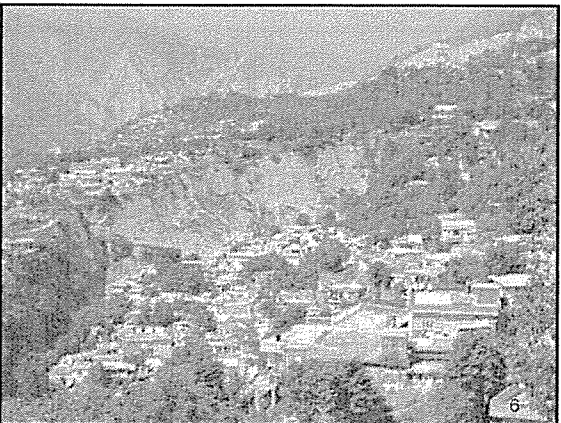
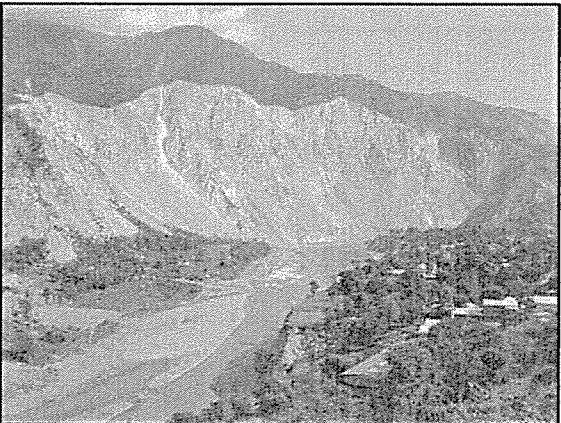
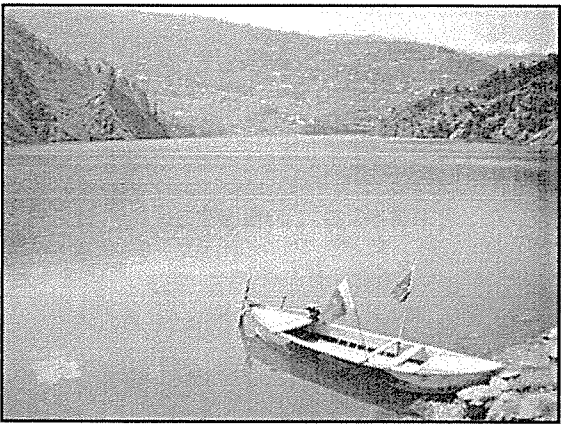
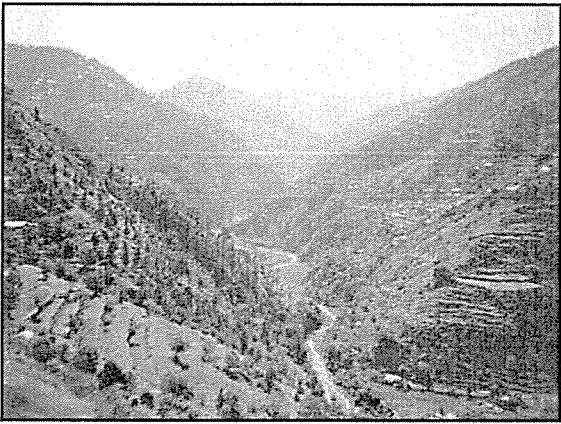
東京大学 堀田昌英
 2007年12月6日

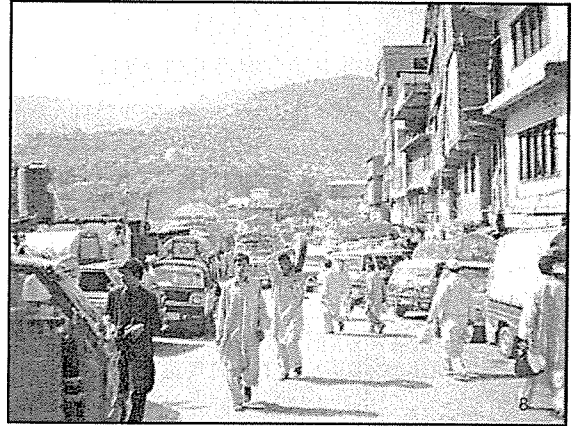
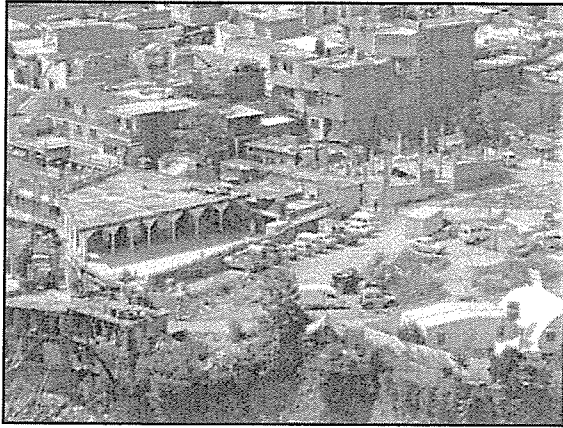
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現地調査の概要

- 2007年9月11日～11月9日パキスタンに滞在
- 対象: ムザファラバード西岸バイパス設計調査
- 調査内容:
 現況調査, SHM, 関係機関・被影響世帯聞き取り調査, 用地測量視察

2

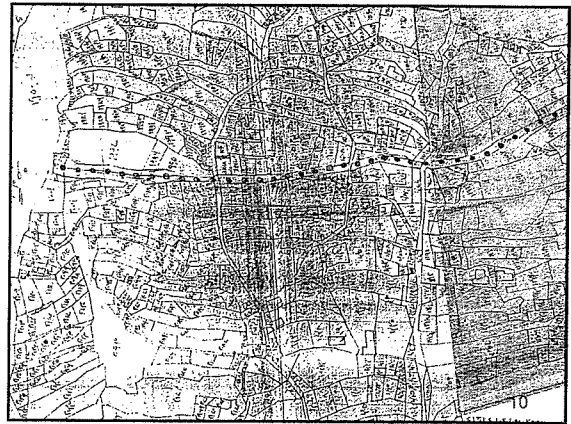




現地視察及びGPS測量

- JICA調査団の詳細設計図・環境影響評価・土地収用及び住民移転計画を基に、現況をGoogle Earth上に再現
- 影響世帯への聞き取り調査結果とステークホルダー協議議事録を地図上にプロット
- 地籍情報を活用することで、LARP作成作業、および用地測量を効率化することが本来可能である。

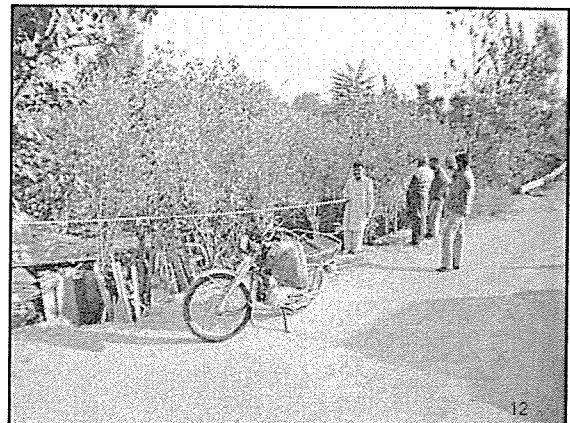
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【被影響世帯への聞き取り調査】

- JICA調査団が行ったコンサルテーションのプロセスには満足している。
- 現地政府が土地収用・住民移転を行うことに反対。JICA(日本)に直接関わって欲しい。
- 収用の前に十分な告知期間(半年～1年)を設けるべきである。
- しかし用地測量時には住民が反対意見や不満をPWDに直接申し立てる光景は全く見られない

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【プロジェクトサイクル】

- 10月末D/D完了
- 10月22日WS:今後の体制について協議
 - EIAおよび土地収用に関する責任体制？
- 10月31日役割分担決定
 - EIAはEnvironment Protection Agency (EPA), AJKをSERRAの環境担当が補助する
 - 土地収用はPWDとRevenue Departmentが直ちに用地測量を開始。(2008年1月末完了)

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【論点と課題①】

- LARPの実現に関しては土地収用の権限を有するCollector Land Acquisitionと住民移転を管轄するDAMとの連携が必要
- だが、具体的な調整は今後の課題。土地収用の早期実施を決めた一方で、住民移転計画が進まず、住民に影響が及ぶ可能性がある。

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【論点と課題②】

- Development Authorityおよび州地震復興庁は収用に対する補償費が実勢価格に満たないことによる住民の不満を懸念
- Collectorは平均取引価格から算定される補償費をつり上げるための架空土地取引を最も懸念
- 2007年4月District Price Assessment Advisory Committees設置
→仲裁機関となりうるか？

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【論点と課題③】

- JICAのLARP提言がその通りに実行される可能性は「？」
- EIAについてはほぼ提言通りのプロセスで環境配慮がされる見込み。
- 用地測量は概ね順調。しかし土地家屋補償費がJICA提言通り実勢価格を反映したものになるかどうか？
- これらを確認する仕組みがない
(実施はJBIC見返り資金)

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【CRANESシステム開発進捗】

- ✓ 議論ツリー自動構築モジュール
- ✓ 論点クラスター自動構築モジュール
- ✓ ユーザーインターフェイス設計
- 各モジュールの統合(作業中)
- Google Earthとのインターフェイス実装(作業中)

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【バングラディッシュ調査予定

- ※ 期間: 12月11日～2月9日
- ※ 対象: パドマ橋建設計画
- ※ 調査項目:
 - FS環境社会配慮調査結果の可視化
 - FS提言内容の実現可能性評価
 - ステークホルダー聞き取り調査
 - 関係機関間の情報共有・調整過程の現状とあり方について

19

運輸交通分野の環境社会配慮に関する効果的な政策論議システム (研究開発)最終報告会

東京大学 堀田昌英

発表の概要

1. バングラディッシュ国パドマ橋建設事業 現地調査報告
 - a. 政策論議データの収集/分析
 - b. 事業の環境社会配慮に関する考察
2. CRANES適用可能性について
 - a. デモンストレーション
 - b. 研究開発成果と評価
 - c. 今後の課題

2

パドマ橋 現地調査概要

- 目的
 1. 政策論議システムの適用可能性評価
 2. JICA開発調査のフォローアップ
- 調査期間

2007年12月12日～2008年2月8日
- 調査対象地

Munshiganj, Shariatpur, Madaripur
- 対象

被影響住民 (APs) 約800人にRapid Appraisal (内記名回答80名)
- 調査項目

APsの社会経済プロフィール, 事業への賛否, 懸念, 要望等

3

聞き取り調査結果 概要

- 土地家屋の補償規準 (Market price vs. moza fixed price)
- 移転先候補地の不足と地価上昇
- 補償費支払い手続き
- 世帯レベルの住民移転計画 (Microplan) 内容
- 雇用喪失と生計回復

4

議論の構造 - Overview

- Padma Multipurpose Bridge Project, Bangladesh
- Land Acquisition & Population Displacement
- Resettlement Strategies
- Issues Related to Nadibashi (erosion induced APs), Sheltered People
- Issues Related to Women and Vulnerable Groups
- Technical Issues

5

論点 | 「土地収用」

- Padma Multipurpose Bridge Project, Bangladesh
- Land Acquisition & Population Displacement
 - Land Compensation Rate
 - Affected persons (APs) generally registered the land price at the lowest rate, i.e. actually bought the land at a higher price
 - Proper and neutral land price assessment for evaluating land compensation rate
 - Current market rate as a basis for land compensation
 - Cash for land as per compensation
 - Either land for land or cash compensation as per market price
 - As land is scarce, assistance should be provided for group movement in terms of finding new land and land development
 - Need the donor agencies to force the GOB to provide land compensation rate as per current market rate
 - Land compensation price should be included bridge development induced price
 - Land Development Cost
 - Land development cost to be included in compensation package
 - Structures, Trees and Fishes Compensation Rate
 - Structures lost should be compensated at market price plus cost of transfer, reconstruction, lost trees and fishes
 - Compensation should be paid directly to the tenants
 - Compensation for Deep Fishes etc.
- Resettlement Strategies
 - Issues Related to Nadibashi (erosion induced APs), Sheltered People
 - Issues Related to Women and Vulnerable Groups
- Technical Issues

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論点2 「住民移転」

- Padma Multipurpose Bridge Project, Bangladesh
- Land Acquisition & Population Displacement
- Resettlement Strategies
 - Crops lost should be compensated
 - Plot Size in the Resettlement Site
 - Livelihood Restoration
 - There should be a way-out for lands having unclear title/ownership but occupied/possessed by present owners
 - Living with Mixed Community in Resettlement Site
 - Land Area of Resettlement Site
 - Facilities and Land Development in Resettlement Site
 - Location of Resettlement Site and Community Road
 - Restore the Mawa Fish Market on The Same Place
 - Re-construction of Common Property Resources
 - Compensation Payment Procedure
 - Relocation of 30 Households of Hindu Community to Separate Resettlement Site
 - Self Managed Resettlement by Affected Households and Community Road
 - Employment Opportunities of APs
 - Impact on Existing School
- Issues Related to Nadibashi (erosion induced APs), Sheltered People
- Issues Related to Women and Vulnerable Groups
- Technical Issues

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論点3 「チャーの住民」

- Padma Multipurpose Bridge Project, Bangladesh
- Land Acquisition & Population Displacement
- Resettlement Strategies
 - Issues Related to Nadibashi (erosion induced APs), Sheltered People
 - Plot in Resettlement Site within The Same Village or Adequate Cash Compensation for Buying New Land
 - Adequate Cash Compensation for Structure Loss
 - Living with Mixed Community in Resettlement Site
 - Compensation Payment Procedure
 - Cash Compensation for Not Reimbursable Rent
- Issues Related to Women and Vulnerable Groups
- Technical Issues

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論点4 「社会的弱者グループ」

- Padma Multipurpose Bridge Project, Bangladesh
- Land Acquisition & Population Displacement
- Resettlement Strategies
- Issues Related to Nadibashi (erosion induced APs), Sheltered People
- Issues Related to Women and Vulnerable Groups
 - Resettled in Resettlement Site with Compensation and Assistance in All Respects
 - Plot Size in Resettlement Site
 - Compensation Payment Procedure
- Technical Issues

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論点5 「技術・施設」

- Padma Multipurpose Bridge Project, Bangladesh
- Land Acquisition & Population Displacement
- Resettlement Strategies
- Issues Related to Nadibashi (erosion induced APs), Sheltered People
- Issues Related to Women and Vulnerable Groups
- Technical Issues
 - Uses of Charland for Constructing Embankment
 - Location of Toll Plaza

10

事業の環境社会配慮に関する論点

- JICA-F/SとADB-D/Dの「狭間」における
バ国側との情報共有
- 土地収用は既開始
- 住民移転は準備遅延
- D/Dの一部として住民移転など環境社会
配慮を全て行うのは困難
- Resettlement & Rehabilitation(R&R)を独立
した事業と捉える必要性?
- 実施機関(Bangladesh Bridge Authority)の
住民移転に係る実行能力

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日本の協力可能性

- BBAの住民移転・環境社会配慮に係る
能力・人材の開発・強化
- 知識マネジメント支援のシステム供与、
指導
- 住民移転・生活再建事業への参画

12

CRANES適用可能性

- デモンストレーション（実機）

13

研究開発成果と評価

- CRANESのJICA環境社会配慮調査への適用可能性を実証
- 大規模データ用・議論ツリーの自動構築機能を開発
- Google Earthとの連携を実現
→ 論点と地理的文脈の相互チェック
- ステークホルダーの意見収集
→ 住民移転計画策定&実施時申し送り
- プロジェクトサイクルとの一体化が必要

14

今後の課題

1. システム汎用化のための開発課題
 - a. 議論ツリー編集モジュール
 - b. 議事録入力のテンプレート改良
 - c. 多数の案件を想定したデータベース管理
 - d. 議論データを分散環境で管理可能にするサーバ構築
2. 運輸交通分野以外への展開
 - a. コンフリクト・マネジメント
 - b. 越境インフラストラクチャ

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