

Quick Reference Guide: Voice-Text (IVR) CAP Messaging with SABRO and Freedom Fone

Purpose

The aim of this quick guide is to provide instructions and operating procedures for alerting first-responders. Following an incident the HIH needs to alert Hazard Information Hub Operators (HIHOs) and Community Emergency Response Team (CERT) members. The HIHO and CERT are authorized personnel that exchange crisis information between the HIH and the field. We use the Common Alerting Protocol (CAP) Emergency Data Exchange Language (EDXL) -enabled Sahana Alerting Broker (SABRO)

Objectives

- 1) Inform the HIHO to report for duty at the Hazard Information Hub (HIH)
- 2) Inform the CERT members to respond to the hazard event

Operating Procedures

- 1) Create a CAP message with SABRO
- 2) Produce a voice-text message in SABRO
- 3) Record localized audio with Audacity (.mp3 or .wav)
- 4) Upload audio file to FF
- 5) Upload audio file to SABRO
- 6) Issue short-text SMS from SABRO
- 7) View acknowledgement reports in FF

About the Software

- Sahana Common Alerting Protocol-enabled Alerting module is a module of the Sahana Alerting and Messaging and Alerting Broker: <http://www.scdmc.lk/dokuwiki>
- Freedom Fone is an interactive voice response system: <http://www.freedomfone.org/>

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1) Create a CAP message with SABRO

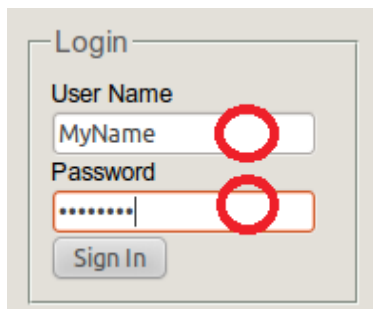
Sahana Alerting and Messaging Broker (SABRO)

1.1) Accessing Sahana

1. To access SABRO visit the website: <http://www.samanathetha.lk/sahana> through a web browser (See Figure 1)



Figure 1: Browser with URL

A screenshot of a login form titled "Login". It contains two input fields: "User Name" with the text "MyName" and "Password" with a masked password ".....". Both input fields have a red circle around them. Below the fields is a "Sign In" button.

2. Login to SABRO by typing in the user name (e.g. MyName) and password (e.g. MyPasswd) given to you (See Figure 2)

Figure 2: Sahana login

1.2) Open SABRO application

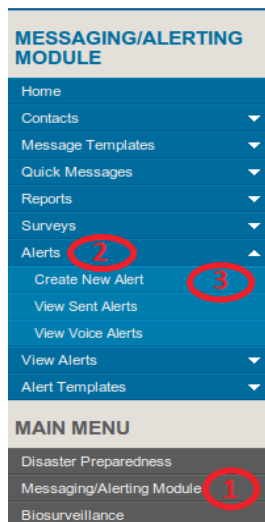


Figure 3: SABRO menus

1. Click on **Messaging/Alerting Module** in the **Main Menu**.
2. Click on **Alerts** to expand the sub menu
3. Click on **Create New Alert** to start a new message (See Figure 3)

1.3) Start a new message

Key: * - Fields tagged with a star (*) are mandatory and must be filled.

New Alert

Select Mode CAP EDXL

Name *

Existing Alert Template New Alert

Template based CAP Alert

New Cap Alert

Message Identifier * ? HELP

Date Created *

Sender * ? HELP

File Type *

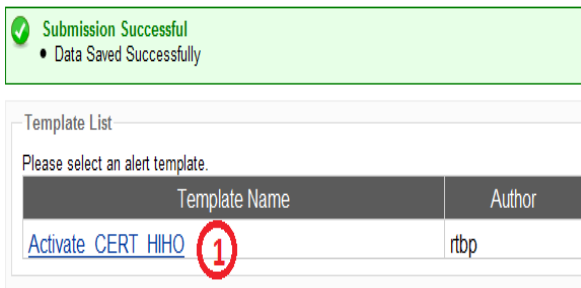
File Version *

Next

Figure 4: new message attributes

1. **Select Mode** as CAP by clicking on the bullet control
2. Type in the **Name** using the following format: `hazard_location_date (yyyymmdd)`
example: `landslide_maskeliya_20110914`
3. Enter **Sender** with your own email id;
example: `myname.hiho@gmail.com` (See Figure 4)

1.4) Select the message template



1. Click on the correct **Template Name**; example: Activate_HIHO_CERT (see Figure 5)

Figure 5: List of message templates

1.5) Complete Alert segment

(See Figure 6)

1. Change **Status** from *Draft* to the appropriate value
 - Actual* = if you are issuing an actual alert based on a real event
 - Exercise* = if you are running a simulation or controlled exercises
 - Test* = if you simply sending a test message to check the system
2. **Scope** is set to Restricted, since the message is restricted to HIHO and/or CERT only
3. The **Restricted** value should be set to indicate the actual [**Restriction**]; if alerting HIHO and CERT both, then leave the Restriction as HIHO only, then delete the part “and Community Emergency Response Team”, leave rest
CERT only, then delete the part “HIH-Operator and”, leave the rest

**** Leave all other default values as it is ****

Creating CAP

Alert Information Resource Area

Message Identifier: hih-1318753311 * ? HELP

Sender: hiho@gmail.com * ? HELP

Message Type: Alert * ? HELP

Status: System * ? HELP ①

Source: hih_srv@samana-thethc * ? HELP

Scope: Restricted * ? HELP ②

Restriction [Restricted]: HIHO and CERT * ③

Optional

Code: Enter space separated set of codes

References:

incidents: all

Update Clear

Figure 6: Alert segment attributes

1.6) Complete Information segment

(See Figure 7)

1. Change the **Category** to the appropriate value(s); you may select more than one value

Geo = [Geological]: earthquake, landslide

Met = [Meteorological]: cyclone, floods, landslide

Health = epidemic, accident, casualties

*** refer to the CAP specifications to learn about all categories ***

Example: a landslide event may be categorised as Met and Goe

2. Enter the **Event**, basically the hazard type; *example: floods, tropical cyclone, typhoon, tsunami.*

3. Select the Priority: Urgent, High, Low

Urgent = message recipients should act immediately

High = choose to act or prepare

Low = do not act but be aware of the situation

Unknown = if you are uncertain of the priority

4. **Sender Name** should be the first and surname of the person authorizing the issuing of the message, such as the HIH manager.

Example: Mr. Manoj Silva

5. **Headline** should contain a human readable title of the event.

Example: Heavy rains cause landslide in Maskeliya.

6. **Description** should contain a self contained human readable message.

Example: Landslide in Maskeliya was reported on 2011 October 13 at 09:50AM.

More than 12 families are affected. Activate emergency response plan.

7. Response Type is set based on the expected response by the message recipients

Execute = the CERT and HIHO should execute their predefined emergency response plan

Assess = CERT members should visit the site and assess the situation

*** refer to the CAP specifications to learn about all categories ***

8. Set the message **Effective** date and time (click in side the field to get the calendar).

This date and time indicates the starting date and time the message valid period

Example: 2011-10-12T10:30:00+5:30

9. Set the hazard event **Onset** date and time (click in side the field to get the calendar).

This date and time indicates the time the hazard event occurred and was reported, typically in the past

Example: 2011-10-12T09:50:00+5:30

10. Set the **Expires** date and time (click in side the field to get the calendar). This date

and time indicates the ending date and time the message valid period; typically in the future.

Example: 2011-10-13T10:30:00+5:30

11. **Instructions** are definitions of certain terms used in the message or actions required by the message recipients.

Example: Activate your emergency response plans would mean acknowledging the alert and reporting to your respective duty stations

**** Leave all other default values as it is ****

The screenshot shows a web form for defining alert attributes. The form is divided into several sections: 'Language', 'Category', 'Event', 'Priority', 'Urgency', 'Severity', 'Certainty', 'Optional', 'Response Type', and 'Effective/Onset/Expires'. Each field is annotated with a red circle containing a number from 1 to 11.

- 1: Category (Geo, Met, Safety, Security, Rescue, Fire)
- 2: Event (Floods)
- 3: Priority (Urgent)
- 4: Sender Name (Tharaka Wilfred)
- 5: Headline (Floods in Batticaloa)
- 6: Description (Floods in Batticaloa 2011-10-12)
- 7: Response Type (Execute)
- 8: Effective (2011-10-12T12:26:00+05.30)
- 9: Onset (2011-10-11T12:26:00+05.30)
- 10: Expires (2011-10-13T12:27:00+05.30)
- 11: Instruction (Activate your emergency response plans...)

Figure 7: Info segment attributes

1.7) Complete Area segment

(See Figure 8)

1. Select Location Category as Sarvodaya
2. Select Location Type based on whether you want to filter by province, district, or division

Example: Sarvodaya-district

3. Type the **Area Description**. If the location (i.e. area description) has already been defined, then the system will automatically suggest the options to select from. If not, you will need to click on the **Add** button to define the new location.

Example: Nuwara-eliya-district

Figure 8: Area segment attributes

1.8) Save the SABRO CAP message

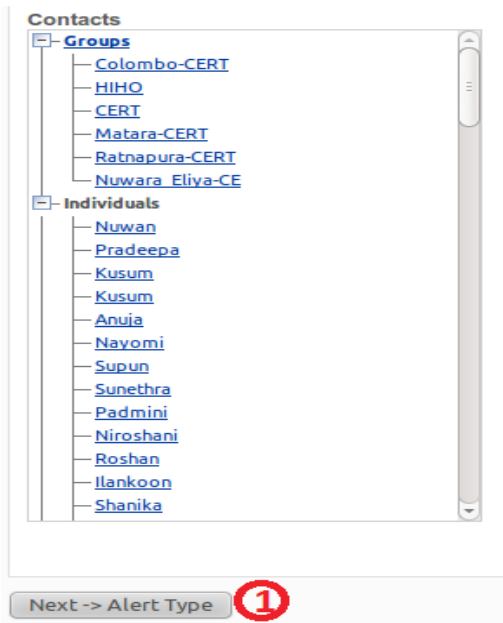
(See Figure 9)

1. Click on the **Update** button to save the message
2. If successfully save, then a message will appear on the top:
 - Submission Successful*
 - Alert was updated!
 - [Click Here](#) to send the updated alert

Figure 9: Save and start to send message

2) Produce voice-text message with SABRO

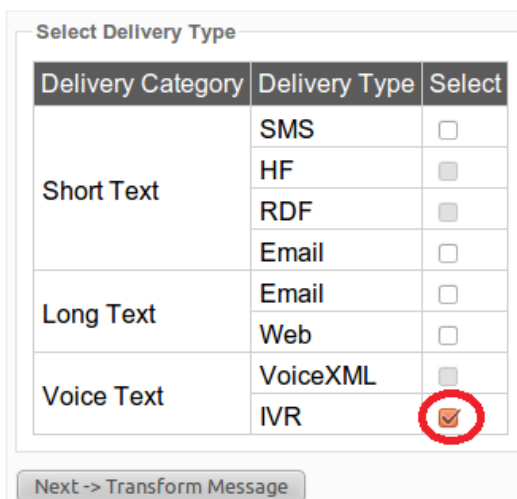
2.1) Start to create IVR message



1. Click on the **Next->Transform Message** to access message delivery type screen (See Figure 10).

Figure 10: Start to create IVR message

2.2) Select IVR check box



1. There are many ways to deliver a CAP message in the form of short text, long text , and voice text. Before creating the audio file with the voice alert, first create IVR text. Select **IVR** check box to create the voice-text (See Figure 11)

Figure 11: Select IVR check box

2.3) Save created IVR message

(See Figure 12)



Figure 12: Save to created IVR message

1. This is the IVR text message generated by the template. You may edit this text if required before submitting for final output.

2. Click on the **Send Message** button to save the message in to sahana system then you can generate the audio file using this text file. (See Figure 15)

2.4) Successful message

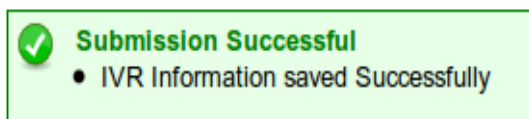


Figure 13: Successful message

1. When you click on that button you can see the **Submission Successful** message as shown in Figure 13.

2.5) Select completed IVR message

(See Figure 14)

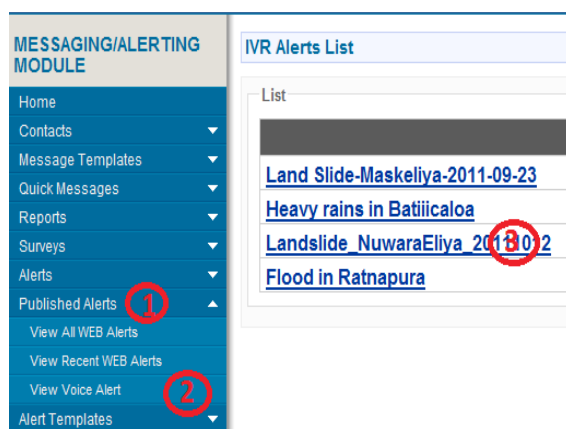


Figure 14: Select completed IVR message

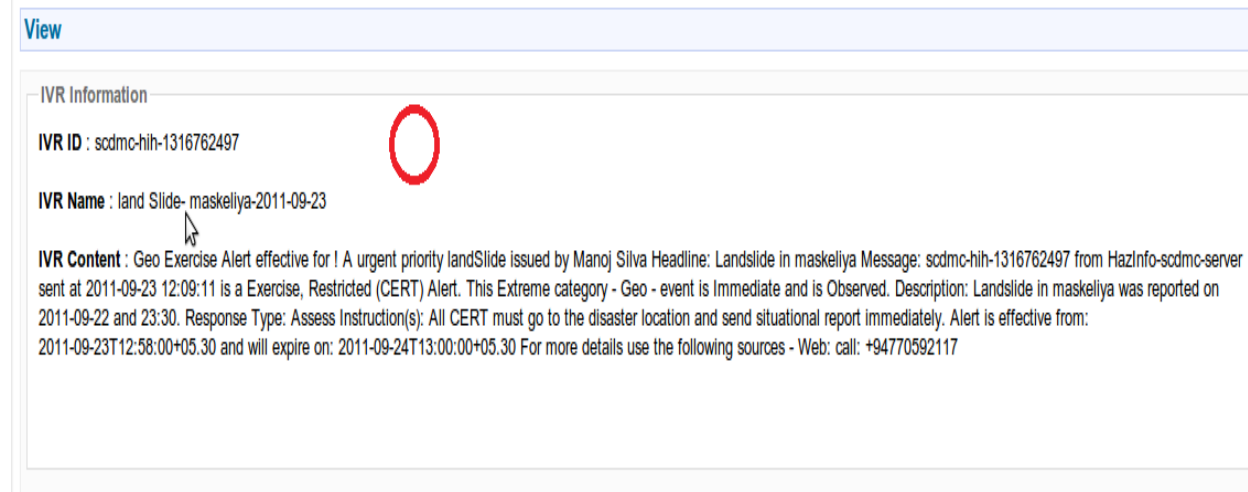
1. Click on the **Published Alerts** to expand the sub menu

2. Click on the **View Voice Alerts** to view all IVR messages.

3. Select the IVR message that you want.
Example [Landslide-NuwaraEliya-2011](#)

2.6) View the IVR voice-text content

Here you can see the message content (Figure 15) you created and submitted in section 2.1.



The screenshot shows a web interface for viewing IVR message content. At the top, there is a blue header with the word "View". Below this is a section titled "IVR Information" with a minus sign on the left. The content is as follows:

- IVR ID :** scdmc-hih-1316762497
- IVR Name :** land Slide- maskellya-2011-09-23
- IVR Content :** Geo Exercise Alert effective for ! A urgent priority landSlide issued by Manoj Silva Headline: Landslide in maskellya Message: scdmc-hih-1316762497 from HazInfo-scdmc-server sent at 2011-09-23 12:09:11 is a Exercise, Restricted (CERT) Alert. This Extreme category - Geo - event is Immediate and is Observed. Description: Landslide in maskellya was reported on 2011-09-22 and 23:30. Response Type: Assess Instruction(s): All CERT must go to the disaster location and send situational report immediately. Alert is effective from: 2011-09-23T12:58:00+05.30 and will expire on: 2011-09-24T13:00:00+05.30 For more details use the following sources - Web: call: +94770592117

A red circle is drawn around the IVR ID, and a mouse cursor is pointing at the IVR Name.

Figure 15: See the content of the IVR message

3) Record localized Audio with Audacity

3.1) Open the Audacity

Now you have to record the message for three languages. First translate the message content, shown in Figure 15, to Sinhala and Tamil. Thereafter, record this message using audacity.

NOTE: You can download audacity software from <http://audacity.sourceforge.net/download/> here and install it to your computer. Then open the Audacity software (typically found in your Program Files). The audacity interface is shown in Figure 16.

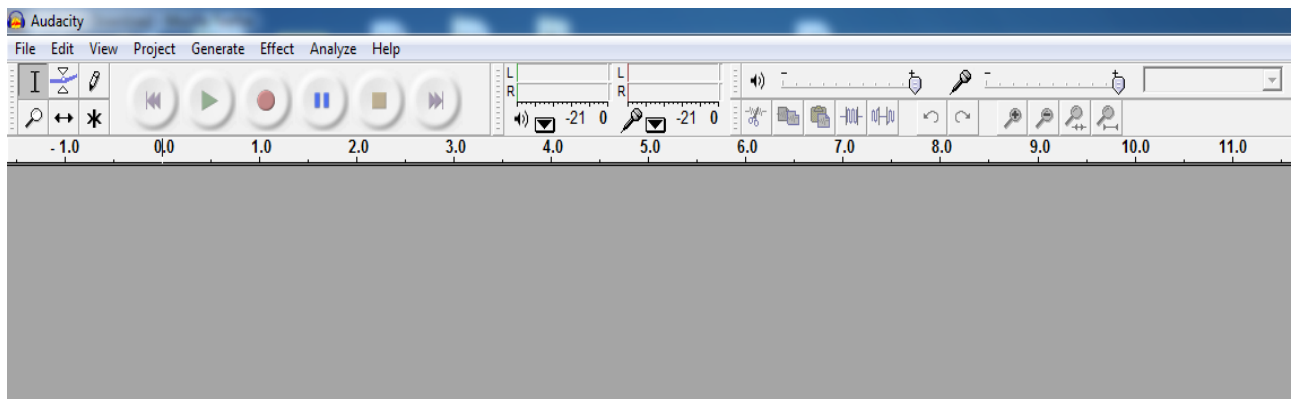


Figure 16: Open the audacity

3.2) Ready mic to record the message

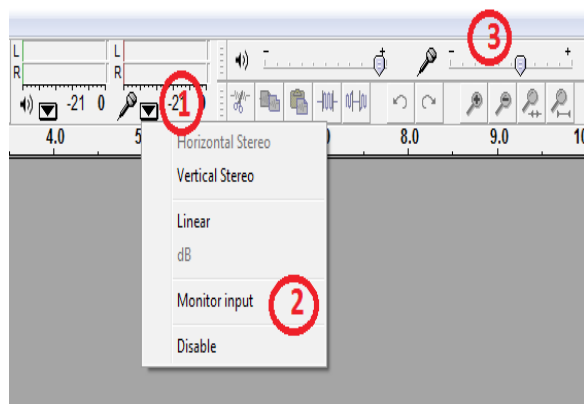


Figure 17: Ready mic to record the message

1. Click on the **mic icon** to expand the sub menu.
2. Select the **Monitor input** to activate the mic
3. Adjust the volume input parameter to control the volume. (See Figure 17)

3.3) Mic is ready to use

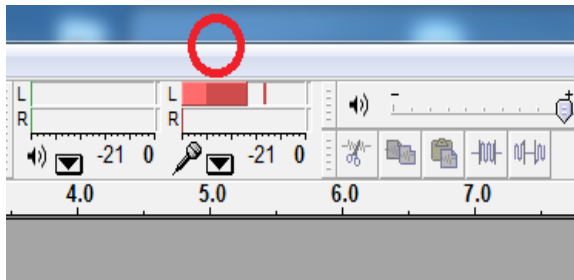


Figure 18: Mic is ready to use

1. If mic is properly set then you can see the red bar in the interface as shown in Figure 18.

3.4) Record a message on audacity

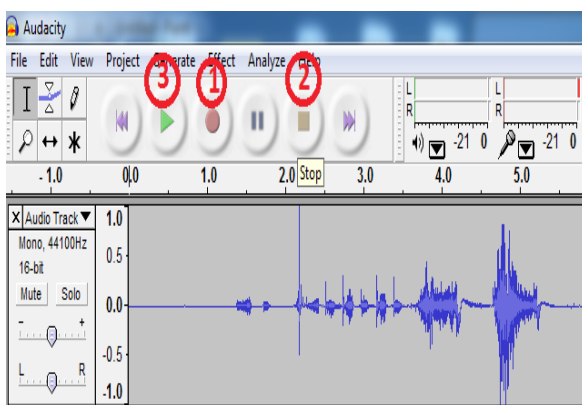
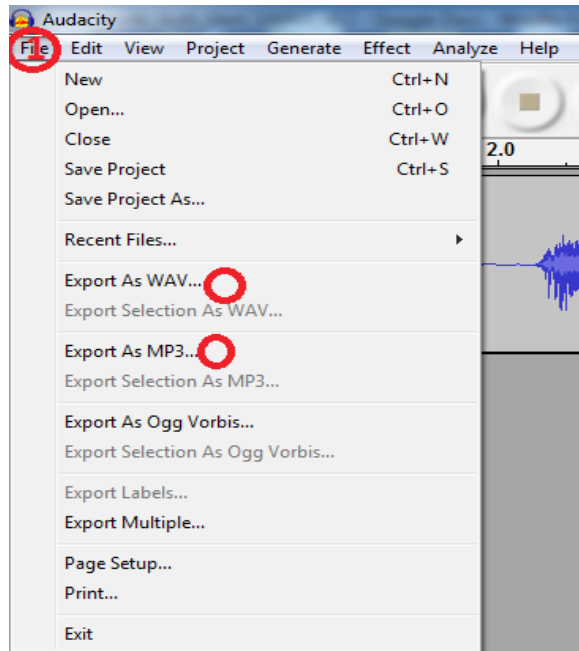


Figure 19: Record a message

1. Click to record a message.
2. Click on this to stop recording.
3. Also you can play the recorded audio file and listen(See Figure 19).

3.5) Save the audio file

(See Figure 20)



1. Click on the **file** tab to expand the sub menu, then save audio file as WAV or MP3.

2. Saved audio file format should be like **hazard_location_language_date.mp3**
Set the language as short form
si = Sinhala
en = English
ta = Tamil

See the example below in **File Name**

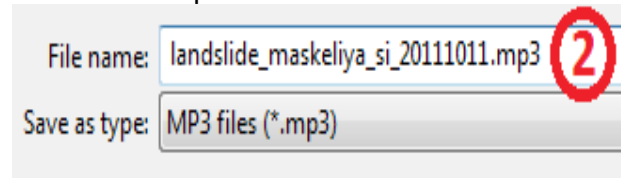


Figure 20: Save the audio file

4) Upload Audio File to Freedom Fone

4.1) Accessing FreedomFone

1. To access FF visit the website: <http://www.samanathetha.lk/freedomfone> through a web browser (See Figure 21)



Figure 21: Browser with URL

Adding new Content

This is where you start with to add the audio file in to FF (See Figure 22).

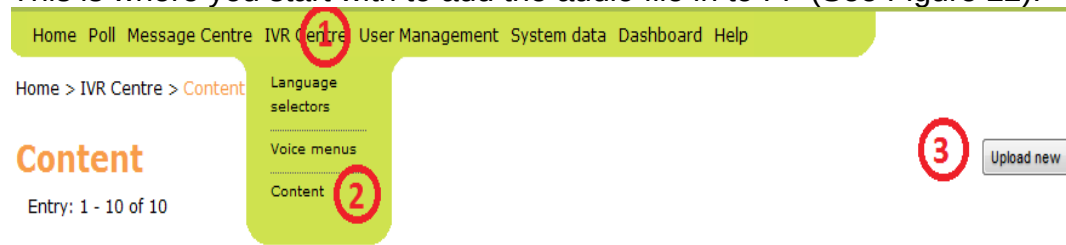


Figure 22: Content

1. Click **IVR Center** menu to expand the sub menu.
2. Click **Content** to upload created audio file.
3. Click **Upload new** button to create new Upload content.

4.2) Customizing the content

(See Figure 23)

Upload Content

Figure 23: Upload content

1. Set the **Title** same as the “headline” value in the SABRO created CAP message.
2. Browse the, incident related, audio alert file (.wav or .mp3) from the directory.
3. Click **Save** button to upload the audio file.

4.3) Editing the Voice Menu

To rebuild the voice menus with the new alert at the top of the “Alert” menu list, (see Figure 24).

Home Poll Message Centre **IVR Centre** User Management System data Dashboard Help

Home > IVR Centre > Voice menu

Voice menus

Audio files should be recorded and be maximum 10MB.

Service	Title	Last modified	Edit	Delete
4104	Field Observation_Resource Responce Selector	Oct 13th, 12:05		
4100	sinhala-welcome	Oct 13th, 15:21		
4103	each-event	Yesterday, 14:21		

Figure 24: Voice menu

1. Click **IVR Center** menu to expand the sub menu.
2. Click **Voice menus** to select the service that you want to update.
3. Click “each-event” **Edit** icon to set the audio file in appropriate place.

4.4) Programming the Voice Menu

The current list is set up as; #1 for Tsunami in Matara, #2 for Tsunami in Moratuwa, #3 for Flood in Batticaloa, #4 for Land-slide in Ratnapura, which needs to be changed.

The new list should be as #1 for Flood in Maskeliya (Newly created audio file), #2 for Tsunami in Matara, #3 for Tsunami in Moratuwa, #4 for Flood in Batticaloa and should remove the last audio file, in this case *Land-slide in Ratnapura*. (i.e. push the stack down)

(See Figure 25).

	Leave-a-Message	Voice Menu	Content
# 1	<input type="radio"/> - Select entry - ▾	<input type="radio"/> - Select entry - 1	Maskeliya ▾
# 2	<input type="radio"/> - Select entry - ▾	<input type="radio"/> - Select entry - 2	Matara ▾
# 3	<input type="radio"/> - Select entry - ▾	<input type="radio"/> - Select entry - 3	Moratuwa-Tsun ▾
# 4	<input type="radio"/> - Select entry - ▾	<input type="radio"/> - Select entry - 4	Flood in Batt ▾ *

Figure 25: Menu options with voice menu

Next create the audio file with instructions to select the required alert message by pressing the respective number (e.g. Press 1 to listen to the alert “Flood in Makeliya”. We call that audio file name as **each-event-instructions**.

4.5) Setting the menu instructions

Menu instructions: a set of mandatory voice message, instructions on how to navigate through the menu (See Figure 26).

2. Instructions

Brief instructions: Repeat the menu alternatives. For example: For news,

Default: Navigate through the menu by pressing any number between 1

Audio file

 1

Do not use uploaded file (each-event.mp3)

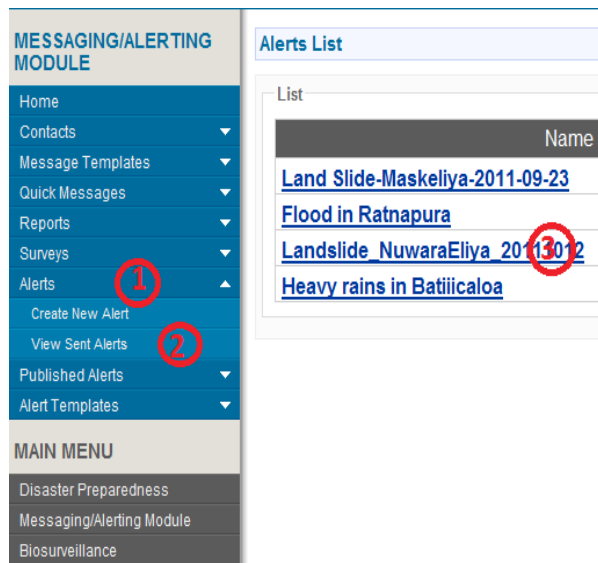
1. Browse the created **each-event-instructions audio** file to upload in to FF and click on the **Save** button in bottom.

Figure 26: Menu instructions with voice menu

NOTE: After correctly placing the new alert message at the top of the alert list, you are ready to issue the alert; i.e. send the SMS as a wake-up function. At the same time upload the audio file to the resource tab in SABRO (see section 5).

5) Upload audio file to SABRO

(See Figure 27)



1. Click on the **Alerts** to expand the sub menu.

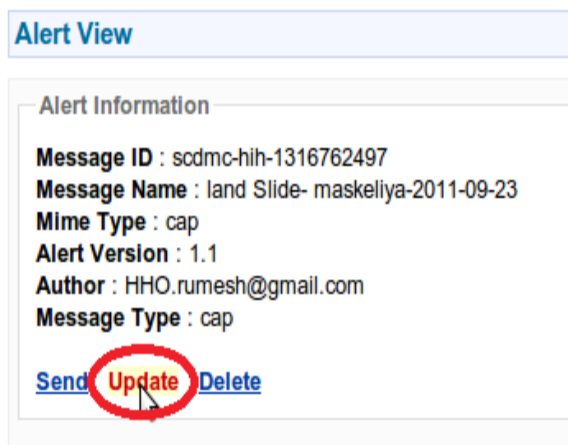
2. Select the **View Sent Alerts** to view all the messages.

3. Select the appropriate message that you want upload the created audio file to.

Example: We have selected [Landslide_NuvaraEliya_20111012](#)

Figure 27: Upload the audio file

5.1) Select Update button



1. Click on the **Update** link to add audio file (See Figure 28).

Figure 28: Select the update button

5.2) Complete data in Resource tab

(See Figure 29)

The screenshot shows the 'Resource' tab of a web application. The 'Resource Description' field contains the text 'Land slide in nepali'. The 'mime Type' is set to '.WAV', and the 'Size' is '2.3MB'. The 'Attachment' field shows a file path 'C:\Users\Public\Music\S' with a 'Browse...' button. The 'Update' button at the bottom left is circled in red.

1. Click on the **Resource** tab.

2. **Resource description** is about the audio file like which language.

3. Enter the **mime type** as WAV or MP3, depending on the filetype the audio was saved.

4. **Size** of the audio file.

5. Browse the audio file here.

6. Click on the **update** button to upload the audio file and save the data.

Figure 29: Complete data in resource tab

5.3) Save and Issue Alert

(See Figure 30)

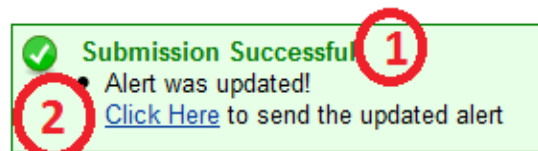


Figure 30: Successful message

1. If it is successful you can see the **Submission Successful** message here.

2. Click on the [Click here](#) to send the SMS to targeted recipients at the same time (see section 6).

6) Issue Short-Text SMS alert with SABRO

6.1) Select the targeted recipient list

(See Figure 31)

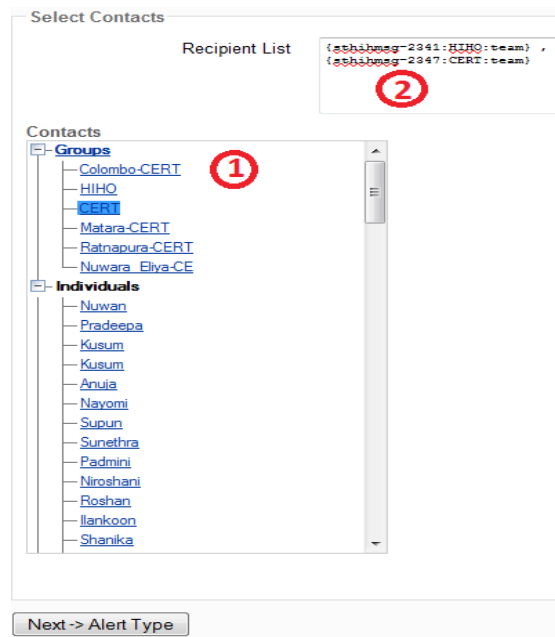


Figure 31: Select the recipients list

1. Select the list of groups and name that you want to send the SMS.

2. Selected recipients list appear in this box.

Example: we have selected Colombo-CERT

3. Click on the **Next-> Alert Type** to select the delivery type.

6.2) Select the Delivery type as SMS

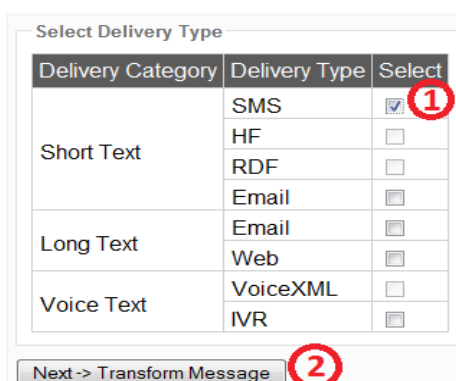


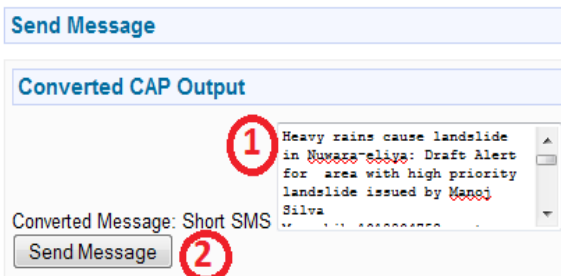
Figure 32: Select delivery type as SMS

1. Select the delivery type as **SMS** to send the message to selected recipients.

2. Click on the **Next->Transform Message** button to convert CAP out put (See Figure 32).

6.3) Converted CAP Output

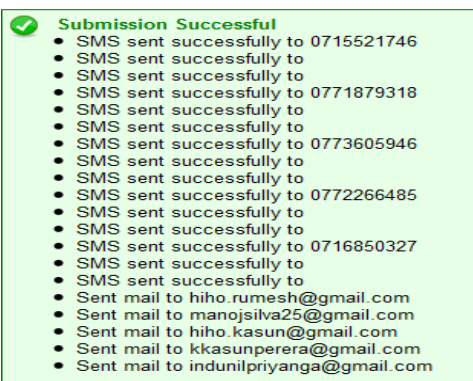
(See Figure 33)



1. You can see the converted output here. This is the content of the SMS.
2. Click on the **Send Message** button to send the SMS to selected recipients.

Figure 33: Converted CAP output

6.4) Submission Successful message



1. If SMS successfully sent to the selected recipients then you can see the **Submission Successful** message as in See Figure 34.

Figure 34: Submission Successful

7) View acknowledgement report in FF

The procedure is such that alert recipients, after listening to the voice alert in FF, should acknowledge message receipt and acceptance. This is done by sending an SMS to the Hazard Information Hub with a text “ack yes” or “ack no”, implying, yes they do or no they don't acknowledge.

7.1.) View Polls

Return to the Freedom Fone **Home** page using this URL <http://www.samanathetha.lk/>. Then you can see the **Polls** in bottom of that page as bellow (See Figure 35).

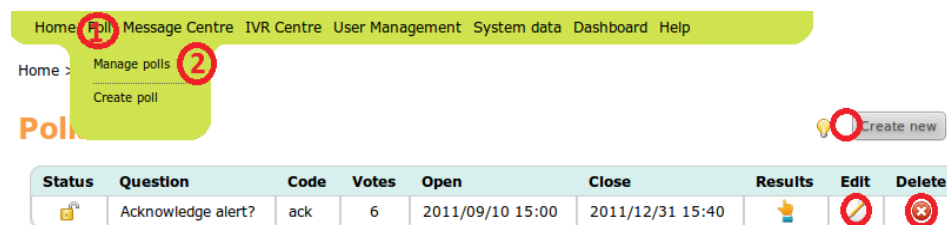


Figure 35: Manage Polls

1. Click on the **Poll** to expand the sub menu.
2. Click on the **Manage polls** to view the list of polls (See Figure 35).

Polls ①

Status	Question	Code	Valid votes	Open	Close	Results	Edit
	Acknowledge alert?	ack	6	2011/09/10 15:00	2011/12/31 15:40	②	

Figure 36: View Polls

1. The Poll service allows end users to participate in polls by sending SMSs to Freedom Fone.
2. Click on the **Results** icon to view polls descriptively as bellow (See Figure 36).

7.2) view polls descriptively

Question: Acknowledge alert? ✍

SMS code: ack

Results

Options	Votes	Percentage	Early votes	Late votes
yes ¹	2	33%	0	0
no ²	4	67%	0	0
"Invalid"	0 ³	0%	0	0
	6		0	0

Poll information

Status	Open ⁴
Start time	2011-09-10 15:00:00 ⁵
End time	2011-12-31 15:40:00 ⁶

1. Here you can see the “**yes**” option Votes and Percentage.
2. Here is another option “**no**”; votes and Percentage.
3. Also if there are invalid options they appear as well.
4. This shows poll is opened.
5. Poll started time is here.
6. Poll end time is here.

Figure 37: View polls descriptively