

# USER'S MANUAL



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Resilient nations.*



[Camdi.ncdm.gov.kh](http://Camdi.ncdm.gov.kh)

# CamDi

CAMBODIA DISASTER LOSS AND DAMAGE INFORMATION SYSTEM

NATIONAL COMMITTEE FOR DISASTER MANAGEMENT  
UNITED NATIONS DEVELOPMENT PROGRAMME

# ACKNOWLEDGEMENTS

The End User Manual of the Cambodia Disaster Loss and Damage Database (CamDi) was made possible with advisory support from senior officials of the National Committee for Disaster Management (NCDM), UNDP Asia-Pacific Regional Centre (APRC) and UNDP Country Office.

We would like to express our profound appreciation to H.E. Ponn Narith, NCDM General Secretary; H.E Choup Sithan, NCDM Advisor; Mr. Rajesh Sharma, APRC Programme Specialist; Mr. Sophon Hum, UNDP Country Office Disaster Risk Reduction Project Coordinator; and Mr. Pairach Homtong, APRC Disaster Inventory Associate, for their guidance and input in developing the CamDi End User Manual. Moreover, we would like to extend our sincere thanks to Mr. Sophal Sam, UNDP Disaster MIS Officer, who customized and set up the CamDi system in Cambodia and wrote this manual.

We would like to extend our sincere thanks to representatives of the Provincial Committees for Disaster Management, key line ministries and key provincial line departments who provided us with comments to improve the manual.

# FOREWORD

We are pleased to introduce the 'The End User Manual of the Cambodia Disaster Loss and Damage Database (CamDi)'. This manual aims to provide the end user with instructions on how to use the CamDi data and tools to generate trend and frequency data analysis on statistics and by theme, and charts on losses and damage from natural disasters in Cambodia from 1996 to the present. The types of natural disasters available on CamDi include flood, drought, storm, lightening, fire, epidemic, pest outbreak and river bank collapse. The data analysis can be made at provincial level, district level and commune level.

CamDi was developed in response to the absence of a system to record, store and analyze loss and damage data in Cambodia. It was established by the National Committee for Disaster Management (NCDM), with technical and financial support from the United Nations Development Programme (UNDP). The CamDi system was launched for official use on 8 July 2014. In addition to this manual, a comprehensive data analysis report of disaster loss and damage was conducted and published. The end user manual and analysis report can be downloaded from the CamDi website: [camdi.ncdm.gov.kh](http://camdi.ncdm.gov.kh).

On behalf of the NCDM, I would like to express my profound appreciation to UNDP for its support in establishing the CamDi system. I would like to extend my sincere thanks to Provincial Committees for Disaster Management (PCDM), District Committees for Disaster Management (DCDM), Cambodia Red Cross and its provincial branches, and key line ministries and their provincial departments who provided data to the CamDi team. I strongly believe that all stakeholders working in disaster risk reduction will use the CamDi system for data analysis to support policy development and reduce disaster impacts.



**H.E. Dr. Nhim VANDA**

Senior Minister in Charge of Special Missions

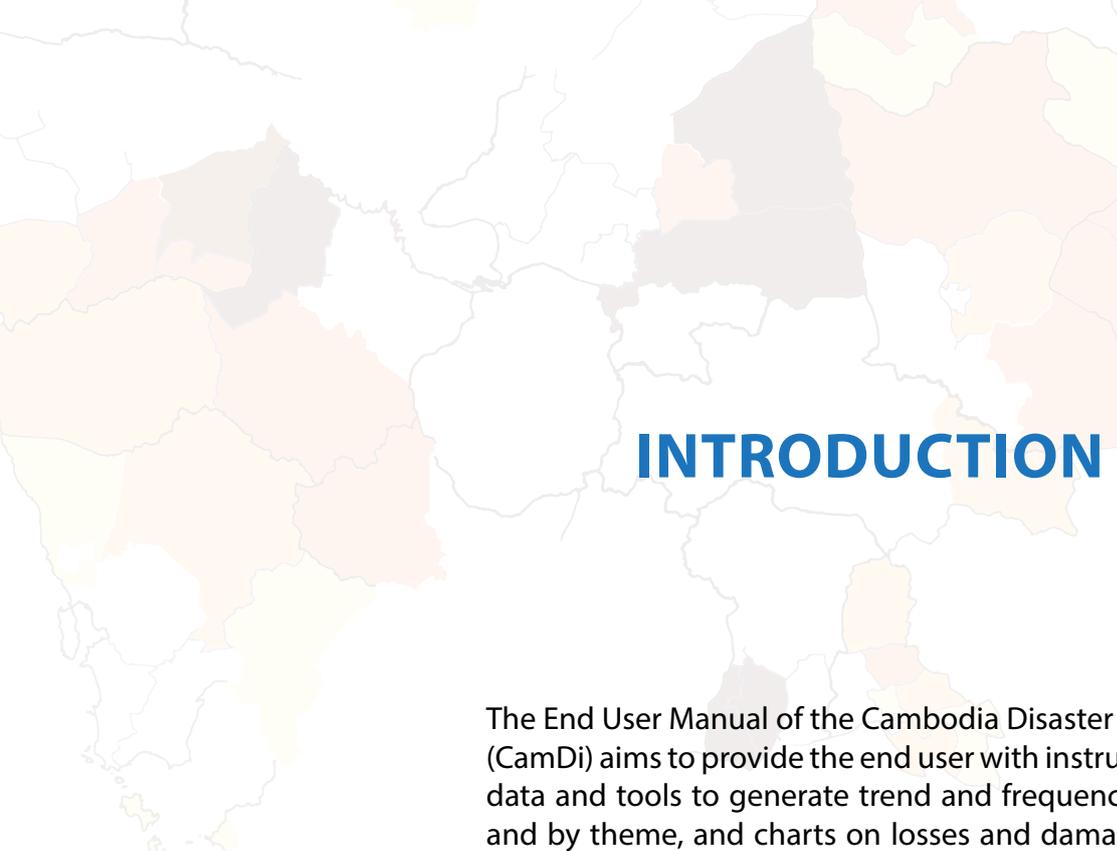
First Vice President

National Committee for Disaster Management (NCDM)

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# INTRODUCTION

# 1

The End User Manual of the Cambodia Disaster Loss and Damage Database (CamDi) aims to provide the end user with instructions on how to use CamDi data and tools to generate trend and frequency data analysis on statistics and by theme, and charts on losses and damage from natural disasters in Cambodia from 1996 to the present. The types of natural disasters available in CamDi include flood, drought, storm, lightening, fire, epidemic, pest outbreak and river bank collapse.

CamDi data can be exported to Microsoft Excel by statistics and crosstab statistics tools, while data analysis can be made using the chart and thematic map tool. Data analysis can be made at national level, provincial level, district level and commune level from selections of query criteria. The CamDi data is ongoing and will be updated by the National Committee for Disaster Management (NCDM). It is open and accessible to the general public at [www.camdi.ncmd.gov.kh](http://www.camdi.ncmd.gov.kh).

The CamDi online application used DesInventar methodology ([www.desinventar.net](http://www.desinventar.net)). The database platform and methodology have been implemented in 15 countries in the Asia Pacific region, as well as America, Africa and Europe. CamDi was established in Cambodia after a series of consultation workshops between NCDM officials and stakeholders, followed by validation with key line ministries who provided data on disaster effects and damage.

The CamDi data variables look at the effects and damage resulting from natural disasters in Cambodia on: human life, housing, agriculture, infrastructure, schools and hospital/health centers. The CamDi data was collected from NCDM, provincial committees for disaster management (PCDMs), district committees for disaster management (DCDMs), the Cambodian Red Cross (CRC), the Ministry of Agriculture Forestry and Fisheries (MAFF), Ministry of Rural Development (MRD), Ministry of Public Works and Transport (MPWT), Ministry of Water Resources and Meteorology (MoWRAM), Ministry of Interior (MoI), Ministry of Health (MoH), Ministry of Education, Youth and Sport (MoEYS) and provincial departments of these line ministries.

The data of effects and damages on:

- 1) Human life and housing is primarily based on NCDM, PCDMs, DCDMs and CRC;
- 2) Agriculture is primarily based on MAFF and its provincial departments;
- 3) Rural roads, water points and latrines is primarily based on MRD and its provincial departments;
- 4) National, provincial and town roads is primarily based on MPWT and its provincial departments;
- 5) Dams and dikes is primarily based on MoWRAM and its provincial departments;
- 6) Hospital or health centers is primarily based on MoH; and
- 7) Schools is primary based on MoEYS. If the data from the concerned ministries is not available, secondary data is based on NCDM, PCDMs, DCDMs and CRC.

While there are different uses of disaster definitions, it is recommended that users read the definitions in CamDi before doing data analysis. The definitions used in CamDi are adopted from DesInventar methodologies and are acceptable for matching data in Cambodia. The definitions of data from the concerned ministries are referenced from the ministries. The definitions used in CamDi are available in the next section of this manual.

## Definitions Used in CamDi

The definitions used in CamDi are adopted from DesInventar methodologies ([www.desinventar.net](http://www.desinventar.net)) and are acceptable in matching data in Cambodia. The definitions of data from the concerned ministries are referenced from the ministries.

The core of the Methodology is contained in the definitions of "Event" and "Disaster". These are not established to contradict or redefine existing widespread definitions, but to serve as the basis for the systematic work of collecting and storing information about disasters in an orderly fashion.

- **Event:** Event is defined as any social-natural phenomena that can be considered as a threat to life, property or infrastructure.
- **Disaster:** Disaster is defined as the set of adverse effects caused by social-natural and natural phenomena on human life, property or infrastructure (an "Event") within a specific geographic unit during a given period of time.

## Disaster Types Available in CamDi

- **Flood:** CamDi records River Flood and Flash Flood. River Flood is an event where water overflows river-bed levels and runs slowly on small areas or vast regions over a long period of time. Flash Flood is an event of violent water flow in a watershed, overflowing, or as torrent. Flash Flood usually carries tree trunks and/or abundant fine to bulky sediment. Flash Flood can be caused by rain, dam bursts or abundant landslides on a watershed or basin.

- **Drought:** An unusually dry season, without rain or with rain deficit. On the whole, these are long periods (months, years and even decades) typical in limited continental areas or on a regional scale. In Cambodia, drought causes damage to paddy fields and farming crops, and also deficit water use for humans.
- **Storm:** Strong winds accompanied by heavy rains and/or lightening. Due to regional connotations, sometimes there is no difference between “storm” and “gale”.
- **Lightening:** Occurrence of atmospheric static discharge which effects people, cattle, domestic properties, infrastructure (power networks, for example causing blackouts) and the environment. Lightening is mostly accompanied by rain; damage is caused explicitly by lightening only.
- **Fire:** A case of uncontrollable fire burning that causes disaster to human life, property or the environment. (Article 4, Law on Fire Prevention and Extinction).
- **River Bank Collapse:** A mass movement of a length of river bank, where the land falls into the river. This event causes damage to houses or roads along the river banks, which then collapse into the river. On occasion, these cause injury and death to people living in houses along the river.
- **Pest Outbreak:** Insects or small animals which multiply very quickly, causing damage to vast tracts of paddy field or farming crops in a short space of time.
- **Epidemic:** A new case of a disease attacks a group of people in a period of time, with the attack spreading further and quicker than expected.

## Data Variables Available in CamDi by Sector

### Effects on Humans and Housing

#### Number of Persons (Persons)

**Deaths:** The number of persons whose deaths were directly caused by the event. When final official data is available, this figure should be included with corresponding observations, for example, when there are differences between official figures and those of other sources.

**Missing:** The number of persons whose whereabouts since the disaster is unknown. It includes people who are presumed dead, but there is no physical evidence. The data on the number of deaths and number of missing are mutually exclusive and should not be mixed.

**Injured:** The number of persons whose health or physical integrity is affected as a direct result of the disaster. This figure does not include victims who die. Those who suffer injuries and or illness if the event is related to a plague or epidemic should be included here.

**Victims:** The number of persons whose goods and/or individual or collective services have suffered serious damage, directly associated with the event. For example, partial or total destruction of their homes and goods; loss of crops and/or crops stored in warehouses, etc. If the information refers to families, calculate the number of people according to available indicators.

**Evacuated:** The number of persons temporarily evacuated from their homes, work places, schools, hospitals, etc. If the information refers to families, calculate the number of people according to available indicators.

**Relocated:** The number of persons who have been moved permanently from their homes to new sites. If the information refers to families, calculate the number of people according to available indicators.

**Deaths – Children:** The number of dead children (aged from 0 to 18-years-old) among the deaths from the disaster event.

**Deaths – Female:** The number of dead females among the deaths from the disaster event.

**Deaths – Elderly:** The number of dead elderly people among the deaths from the disaster event. Elderly includes those aged over 74-years-old.

#### Number of Families (Family)

**Houses Damaged:** The number of homes with minor damage, not structural or architectural, which may continue being lived in, although they may require some repair or cleaning.

**Houses Destroyed:** The number of homes leveled, buried, collapsed or damaged to the extent that they are no longer habitable.

**Victims – Family:** The number of family victims of disaster at the disaster event. If the information refers to people, calculate the number of families according to available indicators.

**Evacuated – Family:** The number of families temporarily evacuated from their homes, work places, schools, hospitals, etc. If the information refers to people, calculate the number of families according to available indicators.

**Relocated – Family:** The number of families who have been moved permanently from their homes to new sites. If the information refers to families, calculate the number of people according to available indicators.

### Effects on Productivity/Agriculture Sector (MAFF/PDAFF)

**Industrial and Subsidiary Crop (Ha.) - Affected:** Industrial and/or subsidiary crops flooded/drought-affected and for what length of time; can self-restore, have sustained minor damage. The number of hectares damaged needs to be assessed once the flood/drought has finished. The data collected from provincial departments can not be distinguished between industrial and subsidiary crops. Therefore, the variable is combined between both types of crop.

**Industrial and Subsidiary Crop (Ha.) – Damaged:** Industrial and/or subsidiary crop that was flooded for many days; assessment on how much cannot be harvested must be done after the flood/drought.

**Transplanted Rice Fields (Ha.) – Affected:** Transplanted rice that flooded for a length of time or number of days; it can self-restore; it sustained minor damage. Assessment on the number of hectares damaged must be done after the flood is finished.

**Transplanted Rice Fields (Ha.) – Damaged:** Transplanted rice that was flooded/drought-affected for a number days and has been assessed as not able to be transplanted to paddy fields.

**Paddy Fields (Ha.) – Affected:** Paddy fields that were flooded/drought-affected for a length of time or number of days; it can self-restore; it sustained minor damaged. An assessment on the number of hectares damaged needs to be done after the flood is finished.

**Paddy Fields (Ha.) – Damaged:** Paddy fields that flooded for many days, and after flood it is assessed that the fields could not be harvested.

**Animal – Dead/Lost Cows (#):** The number of cows that died or were lost during the disaster.

**Animal – Dead/Lost Pigs (#):** The number of pigs that died or were lost during the disaster.

**Animal – Cows/Pigs Evacuated (#):** The number of cows/pigs evacuated to safe places during the disaster.

### Effects on Rural Development Sector (MRD/PDRD)

**Rural Road (m) – Flooded:** The length of rural roads, in meters, flooded. This could be minor or medium damage. The roads may be impassable during flooding or the authorities may close the road for a period of time if use would cause greater damage.

**Rural Road (m) – Damaged:** The length of rural road, in meters, with medium damage during or after floods.

**Rural Road (m) – Destroyed:** Length of rural road, in meters, with serious damage or has been cut off during or after floods. The length of destroyed road that is not functioning during or after the flood, unless it has been rehabilitated or reconstructed.

**Wooden/Iron Bridge (Place) – Flooded:** The wooden/iron bridge where water flows over the bridge or stump of the bridge. The flooded bridge may cause damage to the bridge or stump.

**Wooden/Iron Bridge (Place) – Damaged:** The wooden/iron bridge where the water flows over the bridge or stump of the bridge, and during or after the flood the bridge or stump is damaged.

**Borehole Well (#) – Affected:** Borehole well which flooded, and after the flood, needed to be cleaned to restore clean water.

**Borehole Well (#) – Damaged:** Borehole well which flooded and caused damage to the well spare parts, needing to be repaired and have clean water restored.

**Hand Dug Well (#) – Affected:** Hand dug well that flooded, and after the flood, needed to be cleaned to restore clean water.

**Hand Dug Well (#) – Damaged:** Hand dug well that flooded and caused damage to the well spare parts; needed to be repaired and clean water needed to be restored.

**Toilet (#) – Affected:** Toilet that flooded, and after the flood, needed to be cleaned.

**Toilet (#) – Damaged:** Toilet that flooded and is not usable during flooding; needed to be repaired and cleaned after the flood.

#### Effects on National/Provincial/Town Roads and Bridges (MPWT/PDPWT)

**National/Provincial/Town Road (m) – Flooded:** The length of the national/provincial/town road, in meters, flooded and possibly damaged. The roads may be impassable during flooding, or the authorities may close them to avoid more serious damage.

**National/Provincial/Town Road (m) – Damaged:** The length of rural road, in meters, slightly or moderately damaged during or after flooding.

**National/Provincial/Town Road (m) – Destroyed:** Length of rural road, in meters, seriously damaged or cut off during or after flooding. The length of destroyed roads which are not functioning during or after the flood, unless rehabilitated or reconstructed.

**Concrete Bridge (Place) – Flooded:** A concrete bridge where the water flows over the bridge or stump of the bridge. The flooded bridges may cause damage to the bridge or the stump.

**Concrete Bridge (Place) – Damaged:** A concrete bridge where the water flows over the bridge or stump of the bridge, and during or after the flood, the bridges or stumps were damaged.

#### Effects on Water Resource Sectors (MoWRAM/PDWRAM)

**Dike (m) – Flooded:** The length of dike, in meters, flooded and damaged during or after flooding.

**Dike (m) – Damaged:** The length of dike, in meters, that sustained medium damage during or after flooding. The amount of damage needing to be repaired for the dike to be used as before.

**Dike (m) – Destroyed:** The length of dike, in meters, that was cut during or after flooding. The destroyed places need to be reconstructed for the dike to be used as before.

**Dam (m) – Flooded:** The length of dam, in meters, flooded and damaged during or after flooding.

**Dam (m) – Damaged:** The length of dam, in meters, which sustained medium damage during or after flooding, and the damaged areas needed to be repaired for the dike to contain water.

**Dike (m) – Destroyed:** The length of dam, in meters, cut off during or after flooding. The destroyed areas needed to be reconstructed in order for the dam to contain water.

**Water Gate (Place) – Affected:** The number of water gates flooded and damaged during or after flooding.

**Water Gate (Place) – Damaged:** The number of water gates damaged during or after flooding. The damaged areas needed to be repaired in order for it to be used.

**Water Gate (Place) – Destroyed:** The number of water gates completely damaged during or after flooding. The damaged areas needed to be reconstructed in order for it to be used.

#### Effects on Education Sector (MoEYS/PDEYS)

**Schools (Places) – Affected:** The number of school sites that have been flooded; and schools may stop functioning during floods.

**Schools (Building) – Damaged:** The number of school buildings damaged (not structural or architectural) which may continue being used, although they may require some repair or cleaning.

**Schools (Building) – Destroyed:** The number of school buildings leveled, buried, collapsed or damaged to the extent that they are no longer habitable/useable during or after the flood.

### Effects on Health Sector (MoH/PDH)

**Hospitals/HC (Place) – Affected:** The number of hospital or health center sites that have been flooded; the sites may stop health services during flooding.

**Hospitals/HC (Place) – Damaged:** The number of hospital or health center buildings damaged (not structural or architectural) which may continue being used, although they may require some repair or cleaning.

**Hospitals/HC (Place) – Destroyed:** The number of hospital or health center buildings leveled, buried, collapsed or damaged to the extent that they are no longer habitable/useable during or after the flood.

## CamDi DataCards/Records and Data Disaggregation

### Data Disaggregation

- The information in the CamDi inventories was spatially disaggregated in order to show, and later analyze, the effects of disasters at local level.
- Data recorded in the CamDi database is called DataCard.
- One DataCard records the effects and damage in one commune from the disaster event after the event has finished. One disaster event has one or more DataCards based on whether its effects and damages cover one or more communes. In Cambodia, one flood event generally has more than one DataCard, as flooding causes effects and damage to many communes.
- One DataCard can record effects and damages in one district from a disaster event after it has finished. This method of recording is used, unless data at commune level is not available, especially data from many years past.
- One DataCard can record effects and damages in one municipality/ province from a disaster event after it has finished. This method of recording is used, unless data at commune level and district level is not available, especially data from many years past.
- DataCards of different types of disaster can be compared with each other to understand the number of disaster events and the size of the coverage area.

## Data Arrangement in the CamDi

- Hierarchical structure of data
- Three levels of data:
  - 1) First level – Commune
  - 2) Second level – District
  - 3) Third level – Municipality/Province
- Digital Administrative Boundaries map: Map layer source of Geographic Department, Ministry of Land Management, Urban Planning and Construction.
- Enter data into the CamDi database at commune level if possible.

## CamDi DataCard Viewing

The screenshot displays the CamDi DataCard Viewing interface. At the top, there is a navigation bar with tabs for Profile, Query, View data, View map, Charts, Statistics, Reports, Thematic, and Crosstab. Below this, the region is set to Cambodia - [kh855]. The main form contains the following fields and sections:

- Metadata:** Serial: FI2013, Date (YMD): 2013 10 18, Duration (d): 0, Source: CRC.
- Location:** Province: Prey Veng, District: Peam Chor, Commune: Kaoh Sampov.
- Event Details:** Event: Flood, Location: [empty], GLIDNumber: [empty], Cause: [empty], Description of Cause: [empty].
- EFFECTS:**
  - Deaths: 1, Missing: 0, Injured: 0, Magnitude: [empty]
  - Affected: 0, Relocated: 0, Houses Damaged: 0, Losses \$Local: 0
  - Evacuated: 73, Victims: 2084, Houses Destroyed: 1, Losses \$USD: 602000
- AFFECTED SECTORS:**
  - Transportation (checked), Communications, Relief
  - Agriculture (checked), Water supply, Sewerage
  - Power and Energy, Industries, Education (checked)
  - Other sectors, Health sector
- OTHER LOSSES:** Damages in roads Mts: 2900.0, Damages in crops Ha: 0, Lost Cattle: 0, Education centers: 0, Hospitals: 0.
- OTHER LOSSES:** [empty], Latitude: 0, Longitude: 0.
- COMMENTS:** [empty text area]
- Metadata:** By: Sopha, Date: 2013-12-06.
- Navigation Tabs:** 2. Victims, 2.1. Social Sector, 2.2. Productivity Sector, **2.3. Infrastructure**, 2.4. Irrigation System, 3. Money Value, 4. ER Needs, 5. LTI.
- Infrastructure Data:**
  - Villages Affected & Damaged on Infrastructure: 0
  - National/Provincial/Town Road (m) - Flooded: 0
  - National/Provincial Road (m) - Damaged: 0
  - National/Provincial/Town Road (m) - Destroyed: 0
  - Rural Road (m) - Flooded: 2900
  - Rural Road (m) - Damaged: 1833
  - Rural Road (m) - Destroyed: 1067

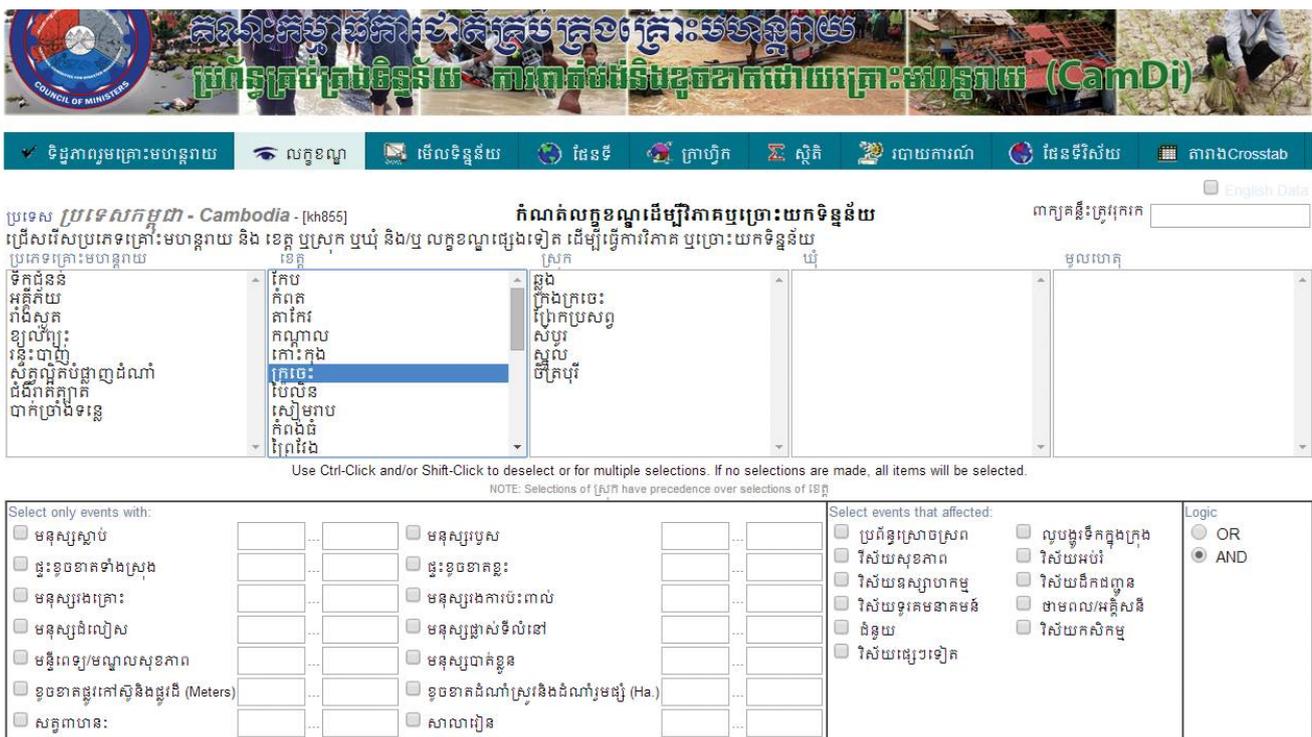
## Change to Khmer/English Interface

The CamDi interface can be changed to Khmer or English by following the step below:

- On the main menu, change the language interface option to Khmer or English:
- Remove the 'tick' to change the geography and extension fields to Khmer.



- The Khmer interface will display as below:



# 2

## ANALYSIS MODULES

The CamDi Analysis has been designed using Tab Interface Menu. Each of the tabs has specific analysis function and purpose as follows:

### Tab Menu

<b>Profile:</b>	To display overall information from the entire database in various formats/outputs
<b>View Data:</b>	To display database in a list format
<b>Query:</b>	To specify scope, condition and constraints to be used as a filter in the calculations
<b>View Map:</b>	To display region/country map
<b>Chart:</b>	To present calculation output in chart format
<b>Statistics:</b>	To calculate statistical values against the selected database
<b>Reports:</b>	To display data in report format
<b>Thematic:</b>	To display or overlay a calculation on the map
<b>Crosstab:</b>	To do a calculation in crosstab format



## Profile Tab Analysis Snapshot by Province and Disaster Type

This country profile shows a set of typical results known as "Preliminary Analysis" coming from the disaster database. Charts, maps and tables provide a basic understanding of the effects of many types of natural disaster which have occurred in Cambodia.

- An analysis snap-shot
- Results shown in a single page
- Gives a big-picture view of losses in the selected database

CamDi Manual: [Khmer](#) | [English](#)

Select what profile you want:

Disaster type  
 Multi-hazard profile

Province  
 ALL

កម្ពុជា - Cambodia

Profile:

This Country Profile shows a set of typical results known as "Preliminary Analysis" coming from the disaster database. Charts, maps and tables below will provide you with a basic understanding of the effects of many types of natural disasters which have occurred in the region. [Click here for more info](#)

**Composition of Disasters**

<p style="text-align: center;"><b>Deaths</b></p> <table border="1" style="width: 100%; font-size: small;"> <thead> <tr> <th>Disaster Type</th> <th>Count</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Flood</td> <td>1091</td> <td>53 %</td> </tr> <tr> <td>Lightning</td> <td>752</td> <td>36 %</td> </tr> <tr> <td>Storm</td> <td>77</td> <td>3 %</td> </tr> <tr> <td>Fire</td> <td>37</td> <td>4 %</td> </tr> <tr> <td>Other</td> <td>3</td> <td>0 %</td> </tr> <tr> <td>Epidemic</td> <td>37</td> <td>1 %</td> </tr> </tbody> </table>	Disaster Type	Count	Percentage	Flood	1091	53 %	Lightning	752	36 %	Storm	77	3 %	Fire	37	4 %	Other	3	0 %	Epidemic	37	1 %	<p style="text-align: center;"><b>DataCards</b></p> <table border="1" style="width: 100%; font-size: small;"> <thead> <tr> <th>Disaster Type</th> <th>Count</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Flood</td> <td>3319</td> <td>42 %</td> </tr> <tr> <td>Storm</td> <td>1194</td> <td>15 %</td> </tr> <tr> <td>Lightning</td> <td>582</td> <td>7 %</td> </tr> <tr> <td>Drought</td> <td>1172</td> <td>14 %</td> </tr> <tr> <td>Fire</td> <td>1408</td> <td>17 %</td> </tr> <tr> <td>Other</td> <td>99</td> <td>1 %</td> </tr> <tr> <td>Pest Outbreak</td> <td>100</td> <td>1 %</td> </tr> </tbody> </table>	Disaster Type	Count	Percentage	Flood	3319	42 %	Storm	1194	15 %	Lightning	582	7 %	Drought	1172	14 %	Fire	1408	17 %	Other	99	1 %	Pest Outbreak	100	1 %
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<p style="text-align: center;"><b>Victims</b></p> <table border="1" style="width: 100%; font-size: small;"> <thead> <tr> <th>Disaster Type</th> <th>Count</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Flood</td> <td>11827882</td> <td>81 %</td> </tr> </tbody> </table>	Disaster Type	Count	Percentage	Flood	11827882	81 %	<p style="text-align: center;"><b>Houses Destroyed + Houses Damaged</b></p> <table border="1" style="width: 100%; font-size: small;"> <thead> <tr> <th>Disaster Type</th> <th>Count</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Storm</td> <td>29249</td> <td>52 %</td> </tr> </tbody> </table>	Disaster Type	Count	Percentage	Storm	29249	52 %																																	
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Take 15 minutes to explore the “Profile” tab

1. What kind of information can you get from the Profile?
2. What useful loss and impact information is shown in the Profile?

- Location
- Human
- Property
- Trend
- Composition
- Spatial report

### Query Tab Criteria Selection for Analysis

The Query tab is a way to ask a specific question of CamDi. Multiple-value can be specified using Ctrl + Click. Complex or expert query is also possible by clicking the **Expert** button. Specifying anything in the “Query” page will affect the rest of the analysis function. Do not forget to reset your query (click the **New Query** button) before changing your analysis needs.

Region **Cambodia** - [kh855] Keyword search (slow)

Select events and geographic units, and set the options that specify the disasters you want to query:

Disaster type	Province	District	Commune	Cause
<input checked="" type="checkbox"/> Flood	Kep			
<input type="checkbox"/> Fire	Kampot			
<input type="checkbox"/> Drought	Takeo			
<input type="checkbox"/> Storm	Kandal			
<input type="checkbox"/> Lightning	Koh Kong			
<input type="checkbox"/> Pest Outbreak	Kratie			
<input type="checkbox"/> Epidemic	Pailin			
<input type="checkbox"/> River Bank Collapse	Siem Reap			
	Kampong Thom			
	Prey Veng			

Use Ctrl-Click and/or Shift-Click to deselect or for multiple selections. If no selections are made, all items will be selected.  
NOTE: Selections of District have precedence over selections of Province

Select only events with: <input type="checkbox"/> Deaths <input type="checkbox"/> Houses Destroyed <input type="checkbox"/> Victims <input type="checkbox"/> Evacuated <input type="checkbox"/> Hospitals <input type="checkbox"/> Damages in roads Mts <input type="checkbox"/> Lost Cattle	<input type="checkbox"/> Injured <input type="checkbox"/> Houses Damaged <input type="checkbox"/> Affected <input type="checkbox"/> Relocated <input type="checkbox"/> Missing <input type="checkbox"/> Damages in crops Ha. <input type="checkbox"/> Education centers	Select events that affected: <input type="checkbox"/> Water supply <input type="checkbox"/> Health sector <input type="checkbox"/> Industries <input type="checkbox"/> Communications <input type="checkbox"/> Relief <input type="checkbox"/> Other sectors	Logic <input type="radio"/> OR <input checked="" type="radio"/> AND
---	---	--	---

Date range: (YYYY MM DD)  
 From: 2000 To: 2013 GLIDENumber:

Expert Selection

Sort results by  Hits per page

## Multiple Criteria Selection

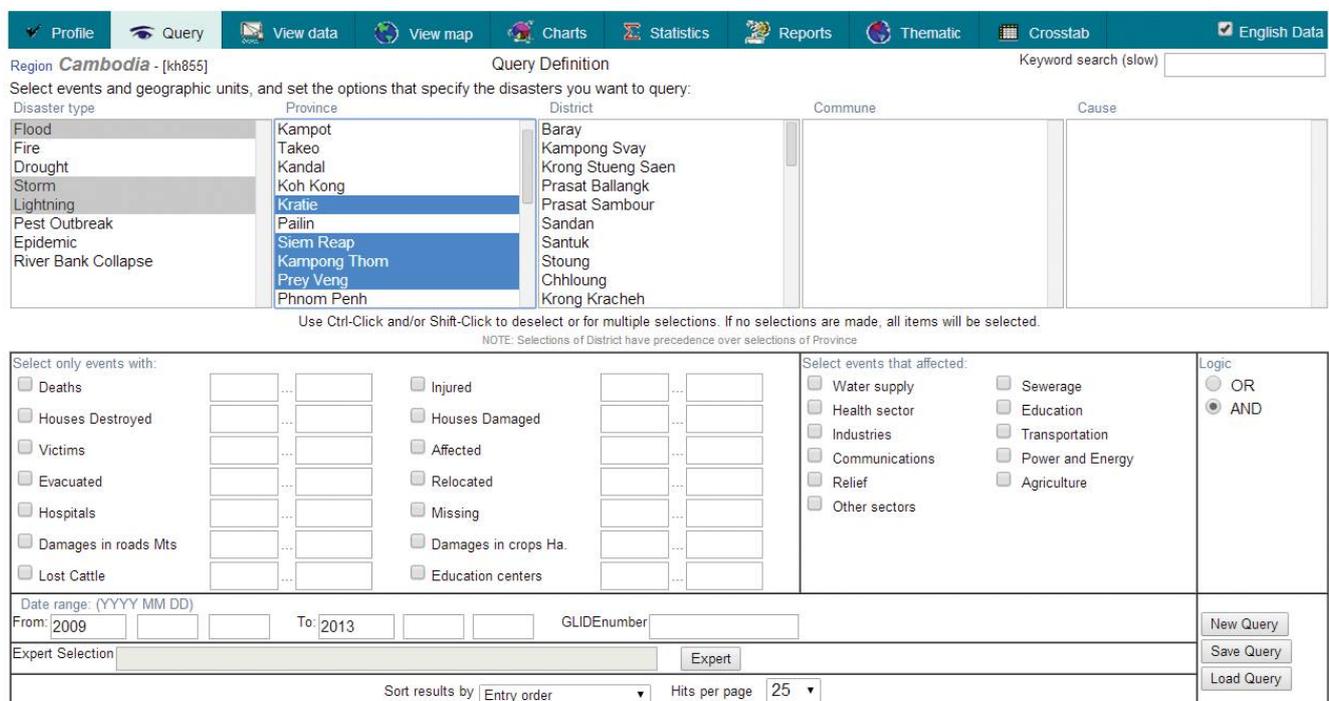
- Use “Ctrl + Click” on criteria (hold down Ctrl key, then click)
- Logical “OR” for criteria producing results for analysis or display, and logical “AND” where only combined criteria can produce results for analysis or display
- To Reset a query, click the  button

### CamDi Practical Exercise

Make a query criteria selection for flood, storm and lightening from 2009 to 2013 in five provinces: Siem Reap, Kampong Thom, Prey Veng, Kratie and Kampong Chhnang.

Solution:

- Click Query Tab
- Ctrl + Click on Flood, Storm and Lightening
- Ctrl + Click on the five provinces: Siem Reap, Kampong Thom, Prey Veng, Kratie and Kampong Chhnang
- Date Range: From: 2009 To: 2013
- The criteria selection will display as below:



The screenshot shows the CamDI Query Definition interface. The top navigation bar includes Profile, Query, View data, View map, Charts, Statistics, Reports, Thematic, Crosstab, and English Data. The main area is titled "Query Definition" and shows the following configuration:

- Region:** Cambodia - [kh855]
- Disaster type:** Flood, Storm, Lightening (selected)
- Province:** Siem Reap, Kampong Thom, Prey Veng, Kratie, Kampong Chhnang (selected)
- District:** Baray, Kampong Svay, Krong Stueng Saen, Prasat Ballangk, Prasat Sambour, Sandan, Santuk, Stoung, Chhloung, Krong Kracheh (selected)
- Commune:** (empty)
- Cause:** (empty)

Below the selection area, there are checkboxes for "Select only events with:" (Deaths, Houses Destroyed, Victims, Evacuated, Hospitals, Damages in roads Mts, Lost Cattle, Injured, Houses Damaged, Affected, Relocated, Missing, Damages in crops Ha., Education centers) and "Select events that affected:" (Water supply, Health sector, Industries, Communications, Relief, Other sectors, Sewerage, Education, Transportation, Power and Energy, Agriculture). The "Logic" section is set to "AND".

The "Date range: (YYYY MM DD)" is set to "From: 2009 To: 2013". The "GLIDENumber" field is empty. The "Expert Selection" button is visible. The "Sort results by" is set to "Entry order" and "Hits per page" is set to "25".

**Statistics Tab**    Statistics Table Generating

Steps in Statistics Table Generating

In order to generate a statistics table in CamDi, these steps need to be followed:

1. On Query Tab, make criteria selections: Click on Query Tab and make criteria selection as below:
  - a. Select one or more Disaster Type. Use Ctrl + Click on multi selections.
  - b. Select one or more Provinces or Districts or Communes. Use Ctrl + Click for multi selections.
  - c. Define date range: From (YYYY - MM - DD) and To: (YYYY - MM - DD) e.g.
2. On Statistics Tab, select Variables needed to be displayed in the statistics table from Available Box to Selected Box by using **Add >>** or **Remove <<** button.
3. On Statistics Tab, define Aggregation Levels: First Level: e.g. Province, Second Level: e.g. District and Third Level: e.g. Commune. If you do not need to use Second Level and Third Level, click the **Don't use** button under the aggregation levels box.

Please define Statistic Functions to produce:

Sum     Average     Maximum     Variance     Standard Deviation

Please define your aggregation levels:

First level of totalization:	Second level:	Third level:
Event Province District Commune Date	Event Province District Commune Date	Event Province District Commune Date
<input type="button" value="Don't use"/>	<input type="button" value="Don't use"/>	<input type="button" value="Don't use"/>
<input type="button" value="Continue"/> <input checked="" type="checkbox"/> Report format		

Please note that only levels that make sense should be selected. For example, makes no sense to choose District as first level and Province as second level. You can select one, two or all three levels of totalization. The more levels you choose, the more detailed is your statistic.

4. Export the Statistics Table to Microsoft Excel: The statistics table generated can be exported to Excel by clicking the link "get it as Excel", then save the exported Excel File.

Statistics generated for Cambodia - [kh855]    Results: 12 hits, 1 Pages : [get it as Excel](#)    CSV

Province	Code	District	Code	Deaths	Injured	Houses Destroyed	Houses Damaged	Victims	Relocated	Evacuated
Prey Veng	14	Ba Phnum	1401	8	0	0	1	7,687	0	1,123
Prey Veng	14	Kamchay Mear	1402	3	0	0	0	0	0	0
Prey Veng	14	Kampong Trabaek	1403	0	0	0	0	1,274	0	0
Prey Veng	14	Kanhchniech	1404	1	0	0	0	17,456	0	0
Prey Veng	14	Krong Prey Veng	1410	1	0	0	0	3,833	0	0
Prey Veng	14	Peam Chor	1406	2	1	6	0	19,861	0	113
Prey Veng	14	Peam Ro	1407	2	0	0	2	29,641	0	2,102
Prey Veng	14	Pea Reang	1408	4	0	0	0	7,669	0	0
Prey Veng	14	Porieng	1411	0	2	0	86	26,087	0	522
Prey Veng	14	Preah Sdach	1409	2	0	4	0	23,047	0	7
Prey Veng	14	Sithor Kandal	1412	1	0	0	0	17,695	0	0
Prey Veng	14	Svay Antor	1413	2	0	0	0	9,136	0	0
<b>TOTAL</b>				<b>26</b>	<b>3</b>	<b>10</b>	<b>89</b>	<b>163,386</b>	<b>0</b>	<b>3,867</b>

Generate statistics table of Paddy Field Affected and Paddy Field Damaged by the 2013 flood in Banteay Meanchey province.

## Solution

### 1. Query Tab

- a. Disaster Type: Flood
- b. Province: Banteay Meanchey
- c. Date Range: From: 2009 To: 2013

Region: Cambodia - [855]

**Query Definition** Keyword search (slow)

Select events 1 geographic units, and set the options that specify the disasters you want to query:

Disaster type	Province	District	Commune	Cause
Flood <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">1</span>	Kratie	Mongkol Borei		
Fire	Kampong Cham	Phnum Srok		
Drought	Kampong Chhnang	Preah Netr Preah		
Storm	Kampong Thom	Ou Chrov		
Lightning	Kampong Speu	Krong Serei Saophoan		
Pest Outbreak	Kampot	Thma Puok		
River Bank Collapse	Takeo <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">2</span>	Svay Chek		
Epidemic	Banteay Meanchey	Malai		
	Pailin	Krong Paoy Paet		
	Battambang			

Use Ctrl-Click and/or Shift-Click to deselect or for multiple selections. If no selections are made, all items will be selected.  
NOTE: Selections of District have precedence over selections of Province

Select only events with:

<input type="checkbox"/> Deaths	<input type="checkbox"/> Injured
<input type="checkbox"/> Houses Destroyed	<input type="checkbox"/> Houses Damaged
<input type="checkbox"/> Victims	<input type="checkbox"/> Affected
<input type="checkbox"/> Evacuated	<input type="checkbox"/> Relocated
<input type="checkbox"/> Hospitals	<input type="checkbox"/> Missing
<input type="checkbox"/> Damages in roads Mts	<input type="checkbox"/> Damages in crops Ha
<input type="checkbox"/> Lost Cattle	<input type="checkbox"/> Education centers

Select events that affected:

<input type="checkbox"/> Water supply	<input type="checkbox"/> Sewerage
<input type="checkbox"/> Health sector	<input type="checkbox"/> Education
<input type="checkbox"/> Industries	<input type="checkbox"/> Transportation
<input type="checkbox"/> Communications	<input type="checkbox"/> Power and Energy
<input type="checkbox"/> Relief	<input type="checkbox"/> Agriculture
<input type="checkbox"/> Other sectors	

Logic:  OR  AND

Date range: (YYYY MM DD)  
From: 2013 3 To: 2013 4 GLIDE number:

Expert Selection 3

### 2. Statistics Tab

- a. **Remove unused variable:** at Selected Box, select variables that are not going to be displayed on the table, and click  button.

Region: Cambodia - [855]

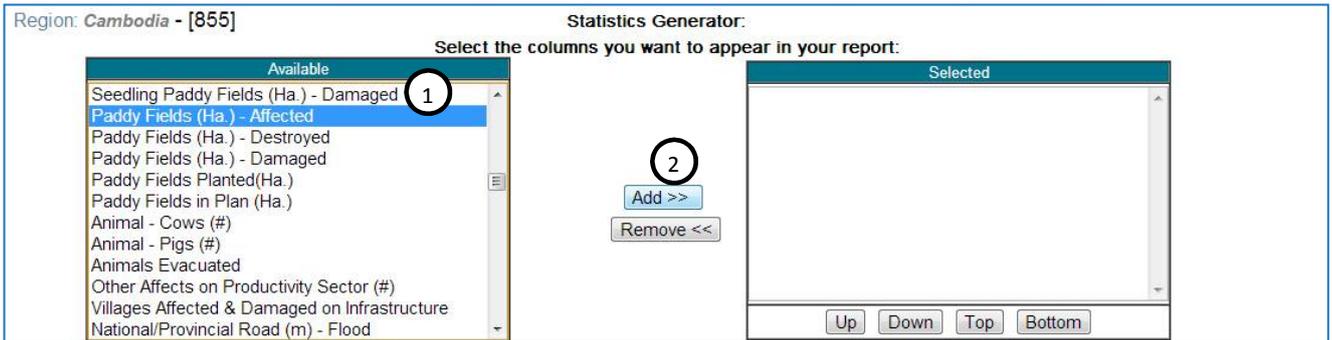
**Statistics Generator:**

Select the columns you want to appear in your report:

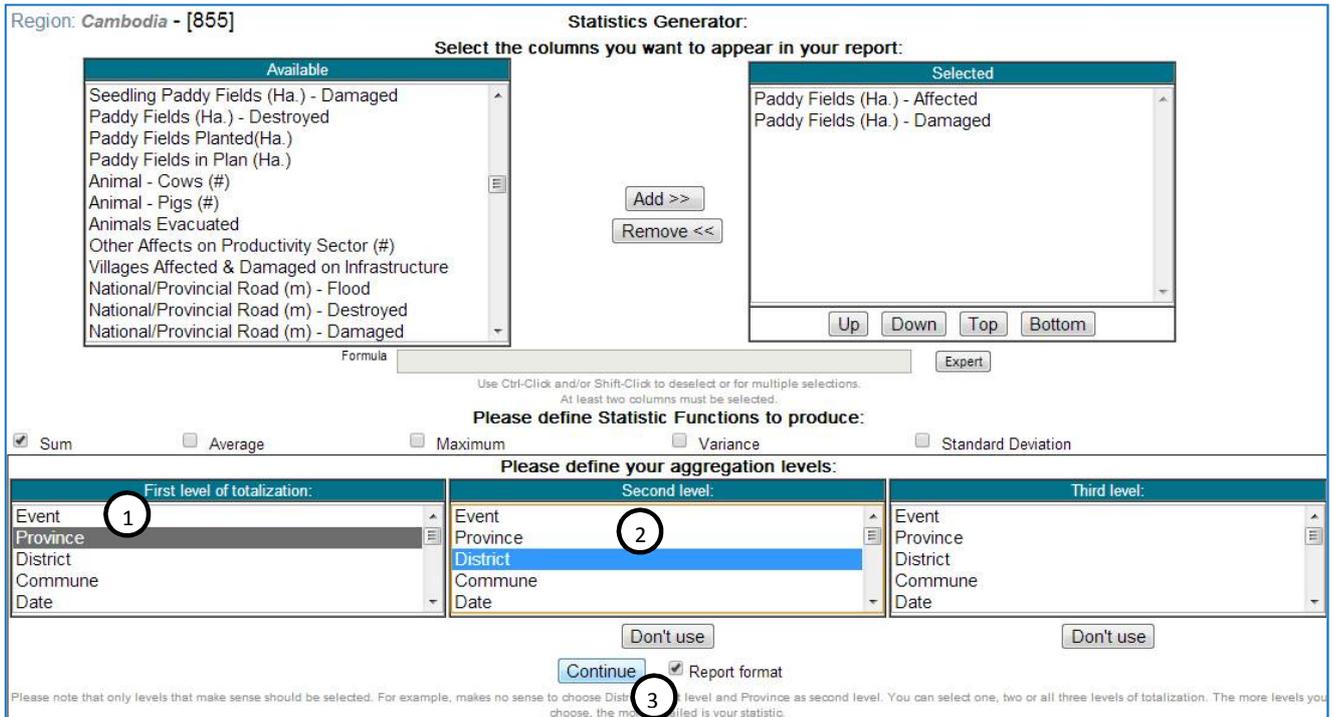
Available	Selected
Losses \$USD	# DataCards <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">1</span>
Losses \$Local	Deaths
Education centers	Injured
Hospitals	Missing
Damages in crops Ha.	Houses Destroyed
Lost Cattle	Houses Damaged
Damages in roads Mts	Victims
Duration (d)	Affected
With Deaths	Relocated
With Injured	Evacuated
With Missing	
With Houses Destroyed	

2

b. **Add Selected Variable:** At Available Box, select variable that needs to be displayed on table, then click **Add >>** button, e.g.: Paddy Fields (Ha.) – Affected, Paddy Fields (Ha.) – Damaged.



c. **Define Aggregation Levels:** After adding Selected Variable into the Selected Box (below pictures: Paddy Fields (Ha.) Affected, Paddy Fields (Ha.) Damaged are selected), the data Aggregation Levels need to be defined: First Level: Province, Second Level: District, then click **Continue** button.



c. Click the link [get it as Excel](#) to export the table to Excel File.

Statistics generated for Cambodia - [855] Results: 9 hits, 1 Pages : [get it as Excel](#) | [CSV](#)

Province ▲	Code	District ▲	Code	Paddy Fields (Ha.) - Affected ▲	Paddy Fields (Ha.) - Damaged ▲
Banteay Meanchey	01	Krong Paoy Paet	0110	470	300
Banteay Meanchey	01	Krong Serei Saophoan	0106	4,921	2,661
Banteay Meanchey	01	Malai	0109	812	428
Banteay Meanchey	01	Mongkol Borei	0102	12,427	4,660
Banteay Meanchey	01	Ou Chrov	0105	7,030	1,428
Banteay Meanchey	01	Phnum Srok	0103	15,240	6,686
Banteay Meanchey	01	Preah Netr Preah	0104	10,962	6,353
Banteay Meanchey	01	Svay Chek	0108	0	0
Banteay Meanchey	01	Thma Puok	0107	693	202
<b>TOTAL</b>				<b>52,575</b>	<b>22,716</b>

## Thematic Tab      Thematic Map Generating

### Steps in Thematic Map Generating

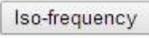
To generate a thematic map in CamDi, the following steps are needed:

1) On Query Tab, make criteria selections:

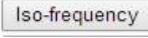
- a. Select one or more Disaster Type. Use Ctrl + Click for multi selections.
- b. Select one or more Provinces or Districts or Communes. Use Ctrl + Click for multi selections.
- c. Define date range: From (YYYY-MM-DD) and To: (YYYY-MM-DD)

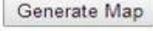
e.g. 

2) On Thematic Tab:

- a. Select one or more Variable to be plotted/analyzed.
- b. Click  button to arrange the map color and legend. This button must be clicked in order for the analysis to be accurate, based on the variable selected.
- c. Choose Output Level:



then click  button to refresh the thematic map analysis.

- d. Make decoration in Map Features box, then click  button.

3) Export the Thematic Map for Documents:

The Thematic Map and its Legend can be exported as an image file for use in Microsoft Word, PowerPoint or other office applications.

- a. Right click on the Thematic Map, then Right Click on Save Image As.... Save the image file in a file location.
- b. Right click on the Legend of the map, then Right Click on Save image as.... Save the image in a file location.
- c. Insert the pictures of the Thematic Map and Legend from the file location where you have saved it in Microsoft Word, PowerPoint, or other office application.

## Thematic Map Setting

### 1) Type of Area ID

- Show names: Show the names of Provinces, Districts or Communes on the thematic map.
- Show codes: Show the codes of Provinces, Districts or Communes on the thematic map.
- No ID shown: No codes or names of Provinces, Districts or Communes shown on the thematic map.

### 2) Output Level

- Province: Show thematic map analysis at provincial level
- District: Show thematic map analysis at district level
- Commune: Show thematic map analysis at commune level

### 3) Legend Type

- Fill area: Show thematic map analysis as filled color
- Discs: Show thematic map analysis as discs of different color and size
- Bars: Show thematic map analysis as bars with different height and color
- Show Value: Tick or un-tick to show or not show values of the thematic map analysis level.

### 4) Map Features

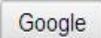
- Width: Define the width of the thematic map
- Height: Define the height length of the thematic map
- Transparency: Define the transparency rate from 0.1 to 0.9 on the Google Map embed

## Embed the Thematic Map in the Google Map

The Thematic Map generated can be embedded in the Google Map by:

- 1) In the Map Features box, the default transparency rate setting on the Google Map is 0.4. The Transparency rate can be set from 0.1 to 0.9.

Map Features	
<b>Generate Map</b> Width: <input type="text" value="1000"/> Height: <input type="text" value="600"/>	<b>Dynamic Map</b> Transparency: <input type="text" value="0.4"/>
Title: <input type="text" value="The 2013 Floods Victim Area"/>	
Subtitle: <input type="text"/>	

- 2) After the Thematic Map setting is done, click the  button.

**Exercise 1:** Generate the Thematic Map analysis of areas with Victims (people) during the 2013 flood in Cambodia, then export the map and its legend to an image file. Embed the map in the Google map.

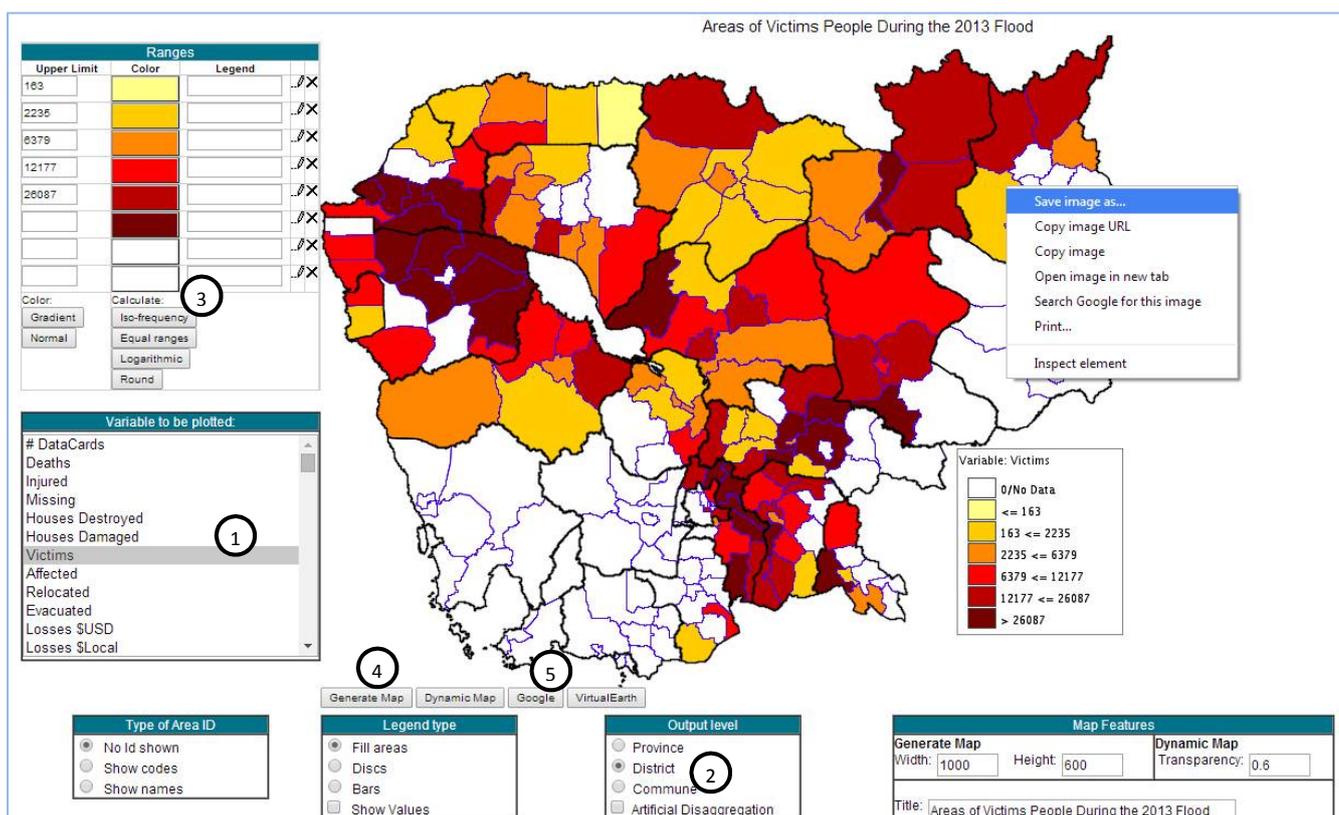
**Solution:**

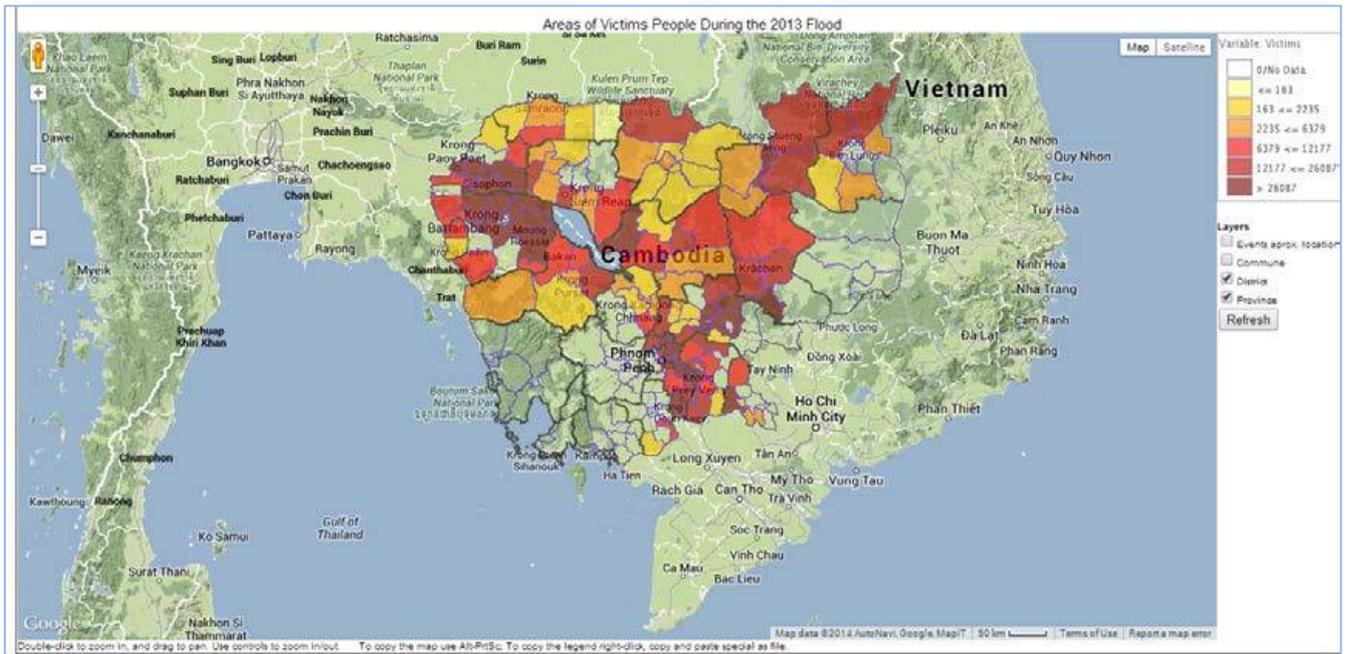
1) On Query Tab

- a. Disaster Type: Flood
- b. Provinces: No selections are made on provinces, which means all the provinces are selected.
- c. Date Range: From: 2013 To: 2013

2) On Thematic Tab

- a. On Variable to be plotted box, select Victims
- b. On Output level box, choose District
- c. Click  button to arrange the analytical color
- d. Click  button to finally generate the map.
- e. Right click on the map, select Save image as..., then save the image of the map as an image file. Do the same for the map legend.
- f. Click the  button to embed the map in the Google Map.





**Exercise 2:** Generate the Thematic Map analysis of Paddy Field Damaged by flood 2013 in Banteay Meanchey province

- Thematic Map analysis at district level, then embed the map in the Google map.
- Thematic Map analysis at commune level, then embed the map in the Google map.

**Solution:**

### 1) On Query Tab

- Disaster Type:** Flood
- Provinces:** Banteay Meanchey
- Date Range:** From: 2013 To: 2013

### 2) On Thematic Tab

- Generate Thematic Map analysis at **district level**, then embed the map in the Google map.
  - On **Variable to be plotted** box, select **Paddy Fields (Ha.) – Damaged**
  - On **Output level** box, choose **District**
  - Click  button to arrange the analytical color
  - Click  button to finally generate the map.
  - Right click on the map, select **Save image as...**, then save the image of the map as an image file. Do the same for the map legend.
  - Click the  button to embed the map in the Google Map.

**Ranges**

Upper Limit	Color	Legend
517	Yellow	<input type="checkbox"/>
1392	Orange	<input type="checkbox"/>
3517	Red-Orange	<input type="checkbox"/>
6612	Red	<input type="checkbox"/>
	Dark Red	<input type="checkbox"/>
	Dark Red	<input type="checkbox"/>
	Dark Red	<input type="checkbox"/>
	Dark Red	<input type="checkbox"/>
	Dark Red	<input type="checkbox"/>
	Dark Red	<input type="checkbox"/>

Color:  Gradient  Normal  Logarithmic  Round

Calculate:  Iso-frequency  Equal ranges  Logarithmic  Round

**Variable to be plotted:**

- Paddy Fields (Ha.) - Damaged
- Paddy Fields (Ha.) - Affected
- Paddy Fields (Ha.) - Destroyed
- Paddy Fields (Ha.) - Planted (Ha.)
- Paddy Fields (Ha.) - in Plan
- Animal - Cows (#)
- Animal - Pigs (#)
- Animal - Evacuated (#)
- Villages Affected & Damaged on Infrastruct
- National/Provincial/Town Road (m) - Floode
- National/Provincial Road (m) - Damaged
- National/Provincial/Town Road (m) - Destro

**Type of Area ID**

- No Id shown
- Show codes
- Show names

**Legend type**

- Fill areas
- Discs
- Bars
- Show Values

**Output level**

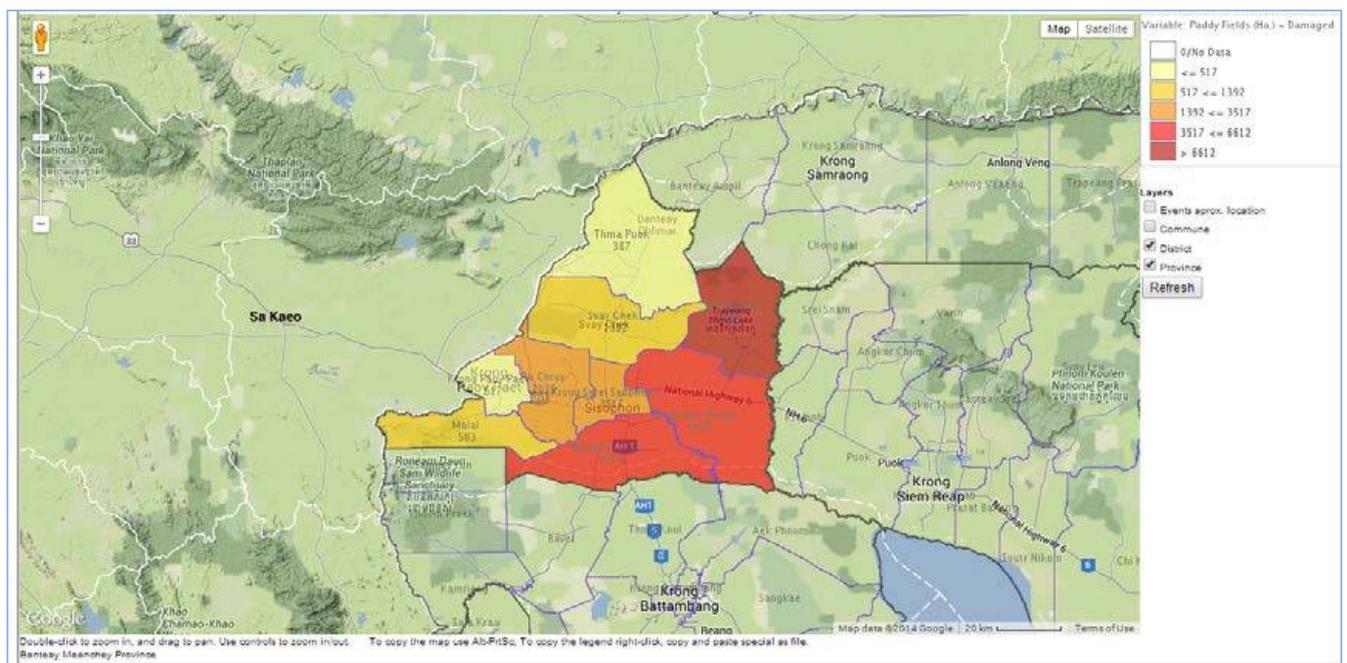
- Province
- District
- Commune
- Artificial Disaggregation

**Map Features**

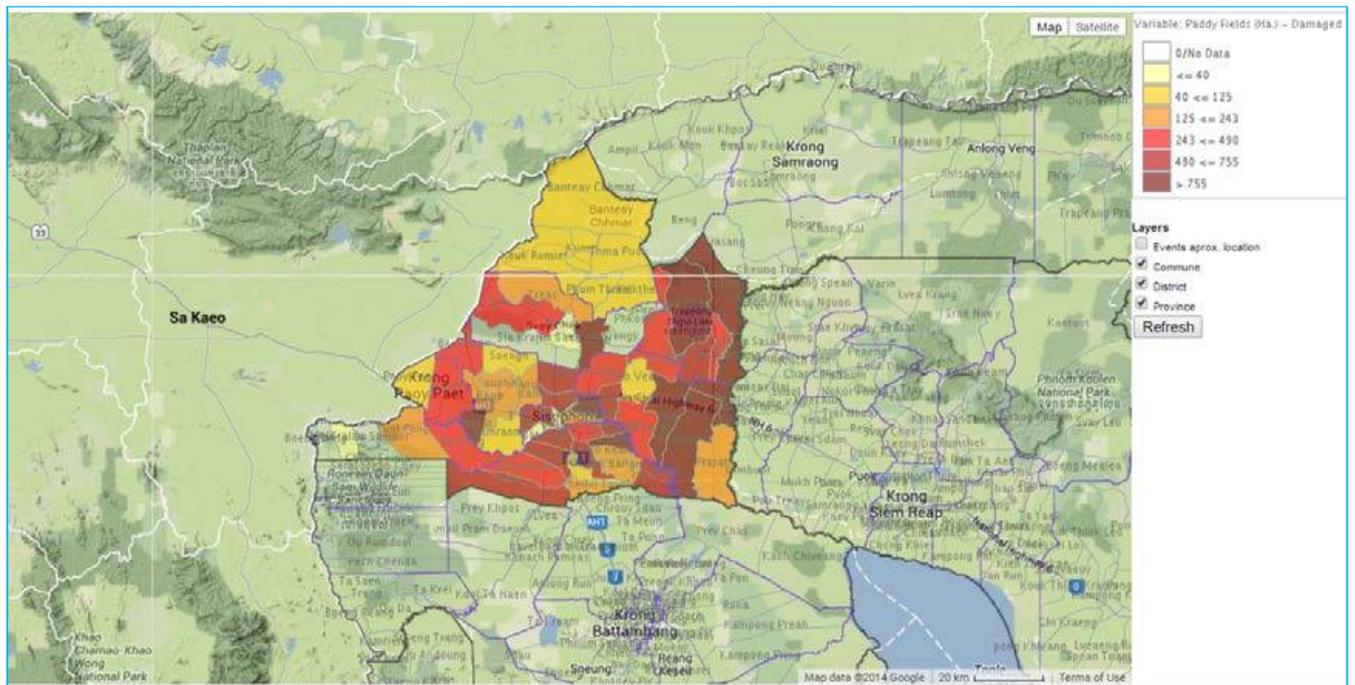
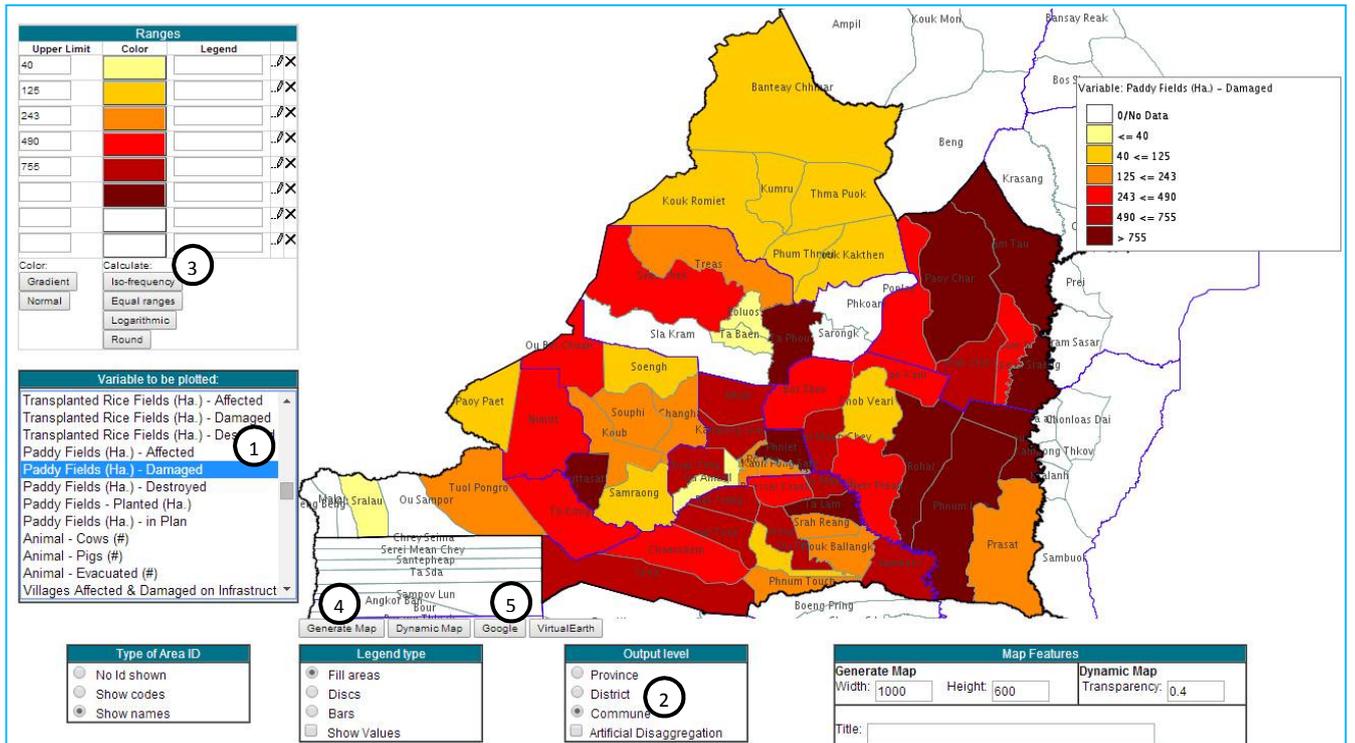
Generate Map Width: 1000 Height: 600 Dynamic Map Transparency: 0.4

Title: Paddy Fields Damaged by 2013 Floods

Subtitle: Banteay Meanchey Province



- Generate Thematic Map analysis at **commune level**, then embed the map in the Google map.
  - a. On **Variable to be plotted** box, select **Paddy Fields (Ha.) – Damaged**
  - b. On **Output level** box, choose **Commune**
  - c. Click  button to arrange the analytical color
  - d. Click  button to finally generate the map.
  - e. Right click on the map, select **Save image as...**, then save the image of the map as an image file. Do the same for the map legend.
  - f. Click the  button to embed the map in the Google Map.



## Steps in Charts Generating

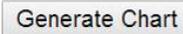
To generate charts in CamDi, the following steps are needed:

1) **On Query Tab, make criteria selection:** Click Query Tab and make criteria selection as below:

- a. Select one or more **Disaster Type**. Use **Ctrl + Click** for multi selection.
- b. Select one or more **Provinces** or **Districts** or **Communes**. Use **Ctrl + Click** for multi selections.
- c. Define date range: From (YYYY-MM-DD) and To: (YYYY-MM-DD)

e.g. 

2) **On Charts Tab:**

- a. In **Variable to be Plotted** box, select one or more **Variables** to be plotted
- b. In **Type of Chart** box, select one **type of chart**
- c. In **Chart Features** box, make setting to the chart.
- d. Click the  button to finally generate the chart.

3) **Export a Chart for Documents:** The chart generated can be exported to be used for documents such as Microsoft Word, PowerPoint and other office applications.

- a. Right click on the **Chart** generated, then choose **Save image as...**, then save the image file in a file location.
- b. Insert pictures of the Chart from the file location where you have saved it in Microsoft Word, PowerPoint, or other office applications.

Profile Query View data View map Charts Statistics Reports Thematic Crosstab English Data

Region Cambodia - [18855]

**1** Type of Chart

- Composition of Disasters**
  - Comparative by Events
  - Comparative by Geography
  - Comparative by Cause
- Temporal Behaviour**
  - Temporal Histogram
  - Event/Temporal Histogram
  - Geographic/Temporal Histogram
  - Cause/Temporal Histogram
  - Multi-variable Histogram
  - Distribution Histogram
  - Seasonal Histogram
- Retrospective risk assessment**
  - Loss Exceedance Curve

**2** Variable to be plotted:

# DataCards

- Deaths
- Injured
- Missing
- Houses Destroyed
- Houses Damaged
- Victims
- Affected
- Relocated
- Evacuated
- Losses \$USD
- Losses \$Local
- Education centers
- Hospitals
- Damages in crops Ha

**3** Generate Chart

**4**

**Chart Features**

- Bar Chart
- Line Chart
- Pie Chart
- Regression

3D

2D

- Normal
- Stacked
- Cumulative
- Logarithmic Scale (Y)
- Logarithmic Scale (X)

Maximum For Chart (Y): 0 0->automatic

Title: Deaths by Types of Disaster

Subtitle: 1996 - 2013

SIZE Width: 1000 Height: 600 Formula Expert

**Deaths by Types of Disaster**

Disaster Type	Count	Percentage
Flood	1107	53%
Lightning	751	36%
Fire	94	4%
Storm	92	4%
Epidemic	33	1%

## Exercise 2: Comparative by Geography

I want to compare number of victim people in the provinces that affected by Mekong River 2013 flood.

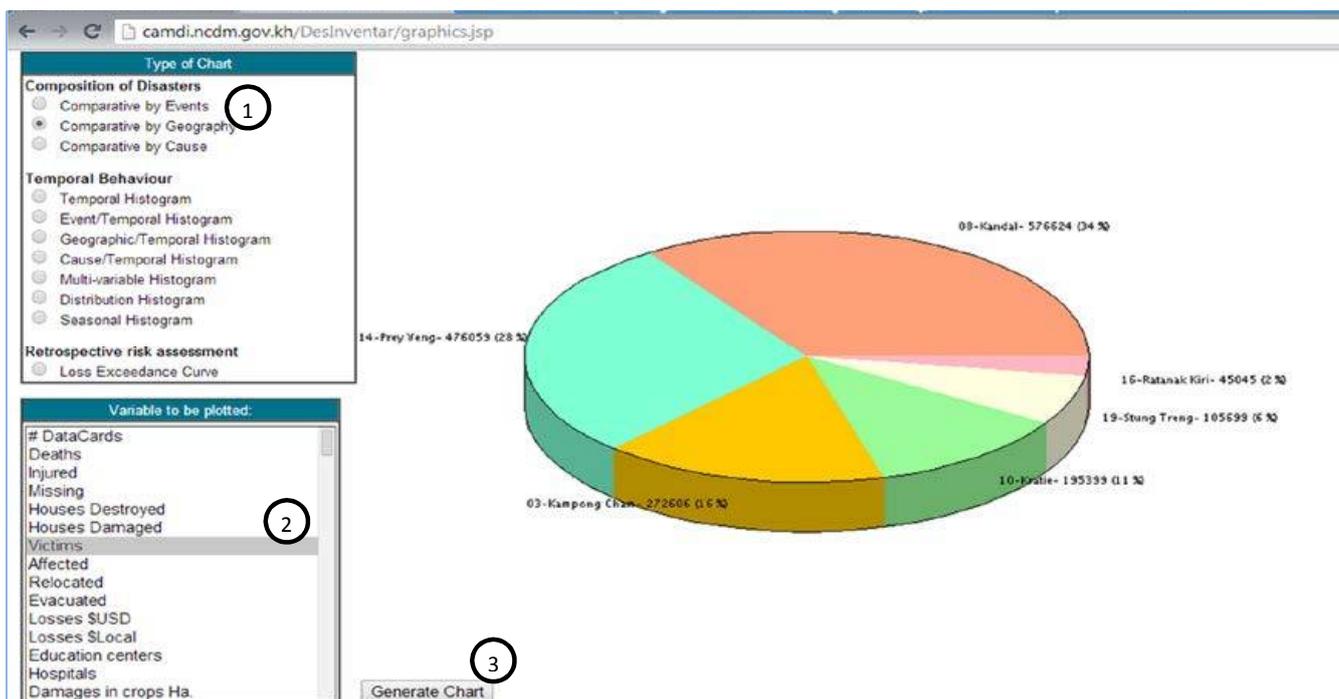
### Solution:

#### 1) Query Tab:

- Disaster Type:** Flood
- Province:** Use **Ctrl + Click** to select a number of provinces such as Steung Treng, Kratie, Ratanakiri, Kampong Cham, Prey Veng, and Kandal.
- Date Range:** From:2013 To: 2013

#### 2) Chart Tab:

- Type of Chart:** Comparative by Geography
- Variable to Plotted:** *Victim*
- Click on button **Generate Chart** to generate the Chart as queried in the exercise.



### Exercise 3: Temporal Histogram

I am working in Prey Veng province. Most reports state that Prey Veng always has a high number of deaths in every flood. I want to see the trend of deaths in Prey Veng from 1996 to 2013.

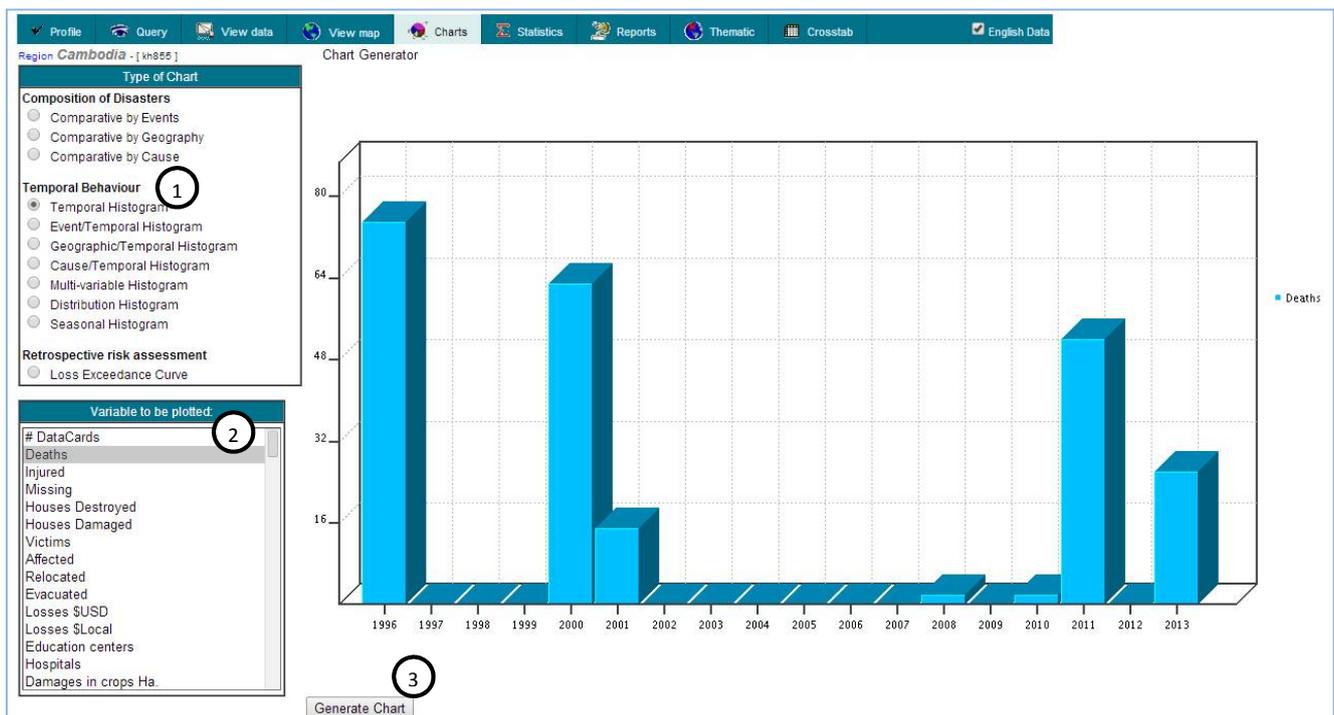
#### Solution:

##### 1) Query Tab:

- a. **Disaster Type:** Flood
- b. **Province:** Prey Veng
- c. **Date Range:** From:1996 To: 2013 (Or do not fill in the Date Range, so CamDi will select all available years)

##### 2) Chart Tab:

- a. **Type of Chart:** Comparative by Geography
- b. **Variable to be Plotted:** Deaths
- c. Click  to generate the Chart.



## Exercise 4: Event/Temporal Histogram

I want to know the trend of Paddy Field Damages by flood, drought/lack of water and pest outbreak from year 2000 to 2013.

### Solution:

#### 1) Query Tab:

- Disaster Type:** Use Ctrl + Click to select disaster type: Flood, Drought and Pest Outbreak



- Province:** No selections on any provinces, so all the provinces are selected.
- Date Range: From:** 2000 To: 2013

#### 2) Chart Tab:

- Type of Chart:** Event/Temporal Histogram
- Variable to be Plotted:** Paddy Field (Ha.) – Damaged
- Chart Features:** Stack
- Click  to generate the chart.



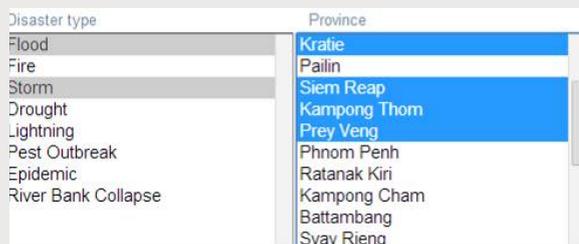
### Exercise 5: Geographic/Temporal Histogram

I want to know the trend of houses damaged and houses destroyed by the 2013 floods and storms in five target provinces from 2000 to 2013. The five target provinces are Prey Veng, Kampong Thom, Siem Reap, Kampong Chhnang and Kratie.

#### Solution:

##### 1) Query Tab:

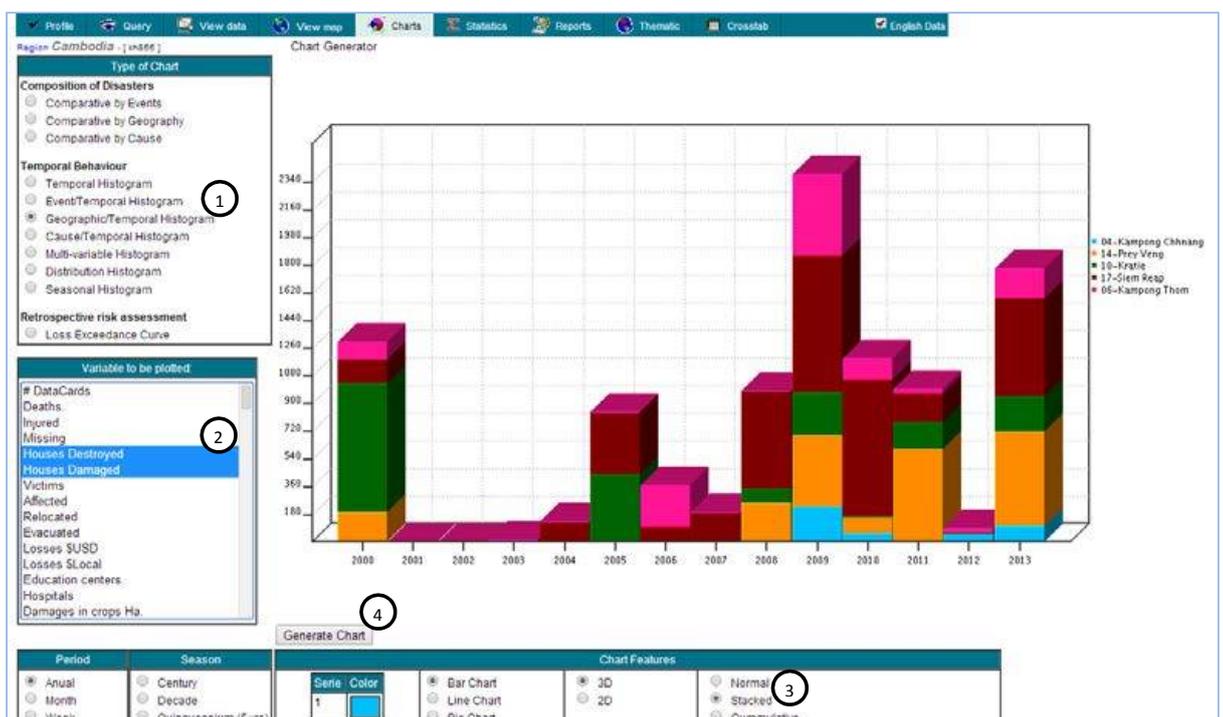
- a. **Disaster Type:** Use Ctrl + Click to select Flood and Storm
- b. **Province:** Use Ctrl + Click to select the five target provinces: Prey Veng, Kampong Thom, Siem Reap, Kampong Chhnang and Kratie.



- c. **Date Range:** From: 2000 To 2013

##### 2) Chart Tab:

- a. **Type of Chart:** Geographic/Temporal Histogram
- b. **Variable to be Plotted:** Use Ctrl + Click to Select House Destroyed and House Damaged
- c. **Chart Features:** Stack
- d. Click Generate Chart to generate the chart.



## Exercise 6: Multi-variable Histogram

I want to know the trend of rural roads damaged and destroyed by flood from 2000 to 2013.

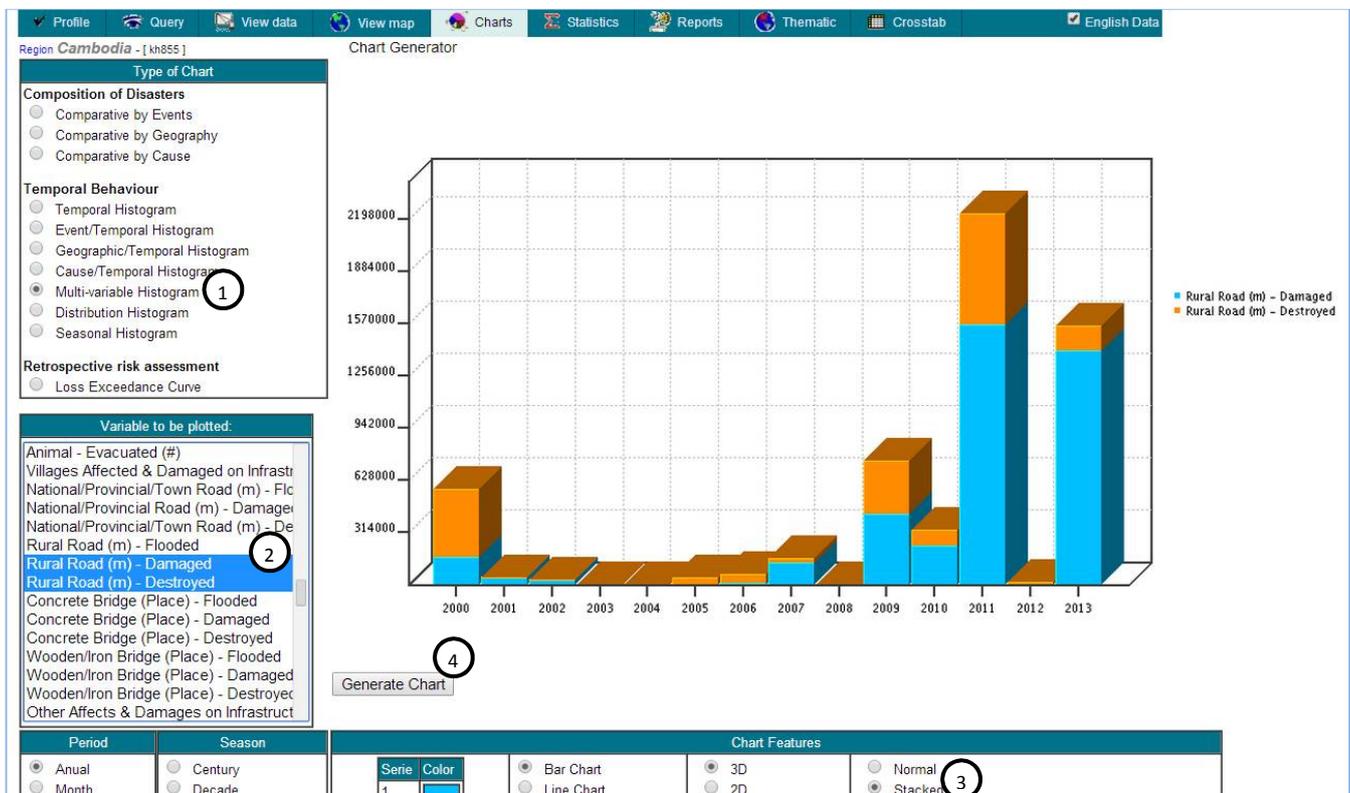
### Solution:

#### 1) Query Tab:

- a. **Disaster Type:** Flood
- b. **Date Range:** From: 2000 To: 2013

#### 2) Chart Tab:

- a. **Type of Chart:** Multi-variable Histogram
- b. **Variable to be Plotted:** Use Ctrl + Click to select Rural Road(m) – Damaged, and Rural Road Destroyed
- c. **Chart Features:** Stack
- d. Click  to generate the chart.



### Exercise 7: Distribution Histogram

I want to know the number of houses normally damaged and destroyed when there is a storm.

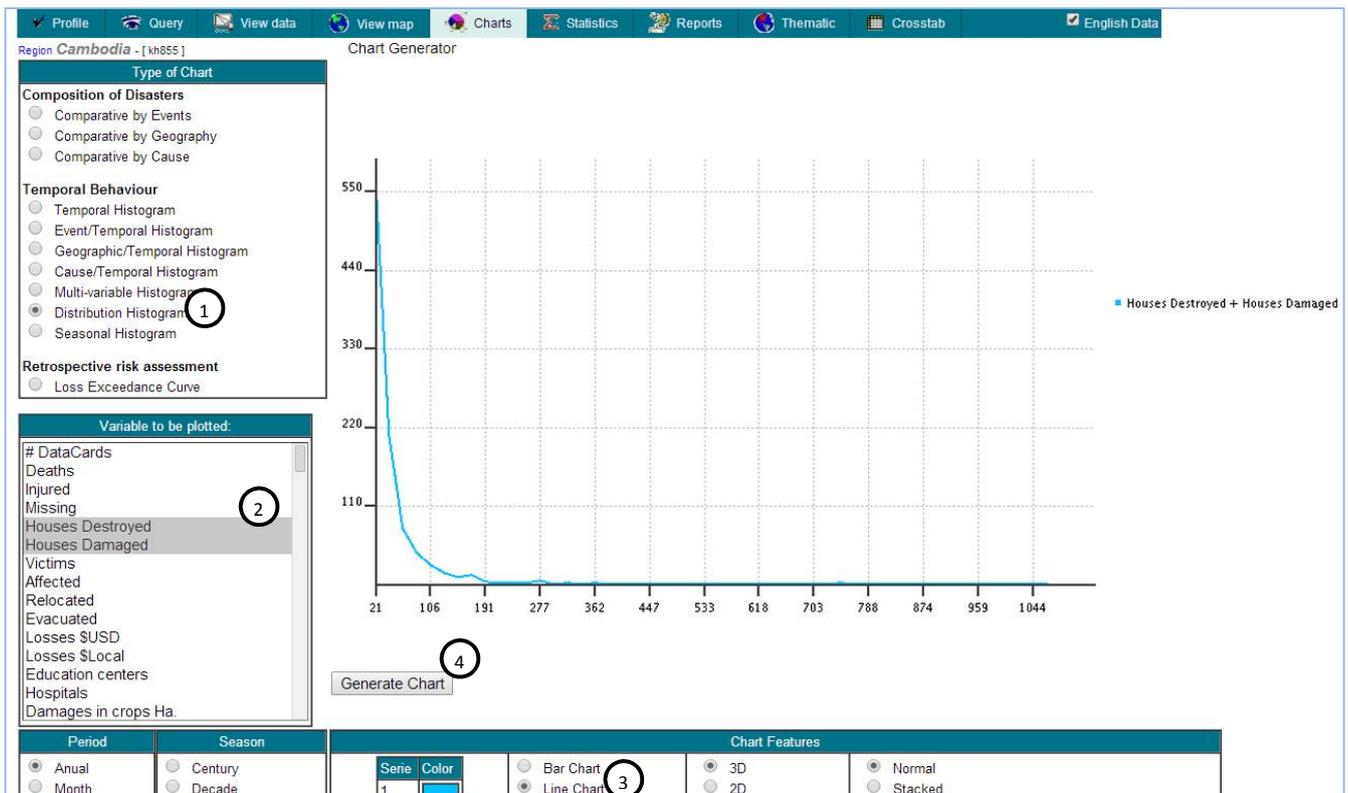
#### Solution:

##### 1) Query Tab:

- a. Disaster Type: Storm

##### 2) Chart Tab:

- a. Type of Chart: Distribution Histogram
- b. Variable to be Plotted: Use Ctrl + Click to select House Destroyed and House Damaged
- c. Chart Features: Stack, Line Chart
- d. Click Generate Chart to generate the chart.



**Exercise 8: Seasonal Histogram**

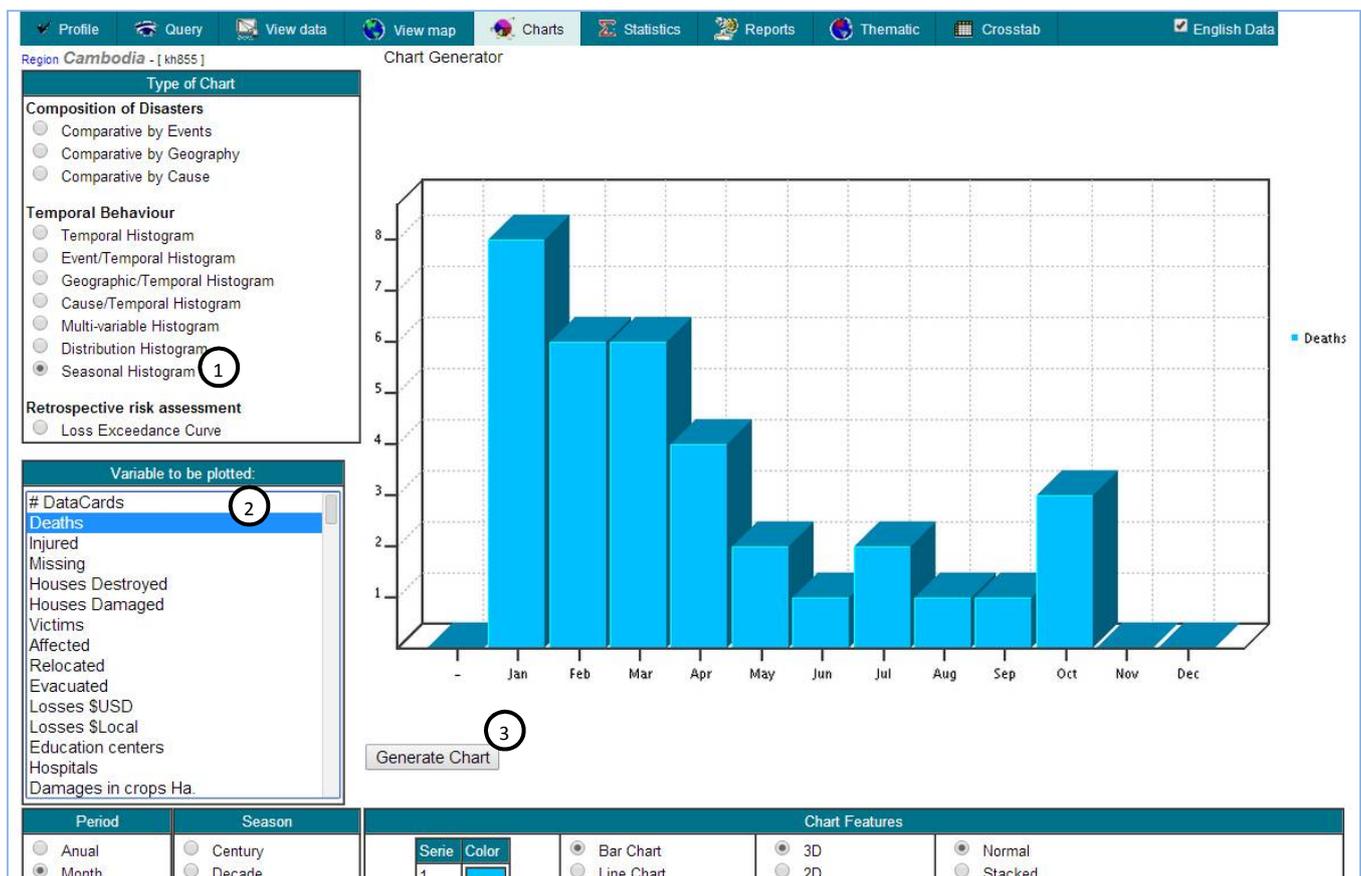
I want to know the months where epidemics have resulted in deaths.

**Solution:****1) Query Tab:**

- a. Disaster Type: Epidemic

**2) Chart Tab:**

- a. Type of Chart: Seasonal Histogram
- b. Variable to be Plotted: Deaths
- c. Click **Generate Chart** to generate the Chart.



## View Data Tab View Detailed Data Fields of Each DataCard/Record

### Steps in Viewing Data

To view detailed data of each DataCard in CamDi, the following steps are needed:

- 1) **On Query Tab**, make criteria selections: Click on **Query Tab**, and make criteria selection as below:
  - a. Select one or more **Disaster Type**. Use **Ctrl + Click** for multi selections.
  - b. Select one or more **Provinces** or **Districts** or **Communes**. Use **Ctrl + Click** for multi selections.
  - c. Define date range: From (YYYY-MM-DD) To: (YYYY-MM-DD)  
e.g.
- 2) **On View Data Tab**: Click **Serial** of the DataCard that has **blue color**; the detail of DataCard will display.



Serial	Event	Province	District	Commune	Date	Location	Deaths	Injured	Missing	Houses Destroyed	Hous
F12013	Flood	Banteay Meanchey	Krong Paoy Paet	Paoy Paet	2013/07/27		✓				
F12013	Flood	Banteay Meanchey	Krong Paoy Paet	Nimit	2013/07/27						
F12013	Flood	Banteay Meanchey	Krong Serei Saophoan	Kampong Svay	2013/07/27						
F12013	Flood	Banteay Meanchey	Krong Serei Saophoan	Kaoh Pong Satv	2013/07/27						
F12013	Flood	Banteay Meanchey	Krong Serei Saophoan	Phniet	2013/07/27						
F12013	Flood	Banteay Meanchey	Krong Serei Saophoan	Mkak	2013/07/27						
F12013	Flood	Banteay Meanchey	Krong Serei Saophoan	Preah Ponlea	2013/07/27		2				

## Practical Exercise

### Solution:

#### 1) Query Tab:

- a. Disaster Type: Flood
- b. Data Range: From: 2013 To: 2013

#### 2) Chart Tab:

- a. Click *Serial* of the DataCard that you want to see, the detailed data of that DataCard will display as below.

Serial	Event	Province	District	Commune	Date	Location	Deaths	Injured	Missing	Houses Destroyed	Houses Damaged	Victims
F2013	Flood	Prey Veng	Preah Sdach	Angkor Reach	2013/10/07							1964
F2013	Flood	Prey Veng	Preah Sdach	Banteay Chakrei	2013/10/07							3791
F2013	Flood	Prey Veng	Preah Sdach	Boeung Daol	2013/10/07							908
F2013	Flood	Prey Veng	Preah Sdach	Chey Kampok	2013/10/07							4855
F2013	Flood	Prey Veng	Preah Sdach	Preah Sdach	2013/10/07							3920
F2013	Flood	Prey Veng	Preah Sdach	Kampong Soeng	2013/10/07							1778
F2013	Flood	Prey Veng	Preah Sdach	Kiang Svay	2013/10/07							
F2013	Flood	Prey Veng	Preah Sdach	Reathor	2013/10/07							4051
F2013	Flood	Prey Veng	Preah Sdach	Rumcheik	2013/10/07							404
F2013	Flood	Prey Veng	Preah Sdach	Sena Reach Otdam	2013/10/07		2					43
F2013	Flood	Prey Veng	Kampong Trabaek	Ansaong	2013/10/10							
F2013	Flood	Prey Veng	Kampong Trabaek	Cham	2013/10/10							
F2013	Flood	Prey Veng	Kampong Trabaek	Cheang Daek	2013/10/10							468
F2013	Flood	Prey Veng	Kampong Trabaek	Kampong Trabaek	2013/10/10							92
F2013	Flood	Prey Veng	Kampong Trabaek	Peam Montear	2013/10/10							714
F2013	Flood	Prey Veng	Kampong Trabaek		2013/10/10							
F2013	Flood	Prey Veng	Pea Reang	Prey Sralet	2013/10/10							1150
F2013	Flood	Prey Veng	Pea Reang	Prey Sniet	2013/10/10							152
F2013	Flood	Prey Veng	Pea Reang	Reab	2013/10/10		2					120
F2013	Flood	Prey Veng	Pea Reang	Kampong Popil	2013/10/10							720
F2013	Flood	Prey Veng	Pea Reang	Kanchem	2013/09/13							2650
F2013	Flood	Prey Veng	Pea Reang	Kampong Prang	2013/10/10							93
F2013	Flood	Prey Veng	Pea Reang	Masa Prachan	2013/10/10							376
F2013	Flood	Prey Veng	Pea Reang	Prey Pnov	2013/10/10							1056
F2013	Flood	Prey Veng	Pea Reang	Roka	2013/10/10		2					1352

Region: Cambodia - [kh855] DataCard: << < > >> Find serial: Back to Search Results

Serial: F2013 Date (YMD): 2013 10 18 Duration (d): 0 Source: CRC

Province: Prey Veng District: Peam Chor Commune: Kaoh Sampov

Event: Flood Location: GLIDNumber:

Cause: Description of Cause:

**EFFECTS**

Deaths: 1  Missing: 0  Injured: 0  Magnitude:

Affected: 0  Relocated: 0  Houses Damaged: 0  Losses \$Local: 0

Evacuated: 73  Victims: 2084  Houses Destroyed: 1  Losses \$USD: 602000

**AFFECTED SECTORS**

Transportation  Communications  Relief  Damages in roads Mts: 2900.0

Agriculture  Water supply  Sewerage  Damages in crops Ha.: 0

Power and Energy  Industries  Education  Lost Cattle: 0

Other sectors  Health sector  Education centers: 0

Hospitals: 0

OTHER LOSSES: Latitude: 0 Longitude: 0

**COMMENTS:**

By: Sophal Date: 2013-12-06

2. Victims	2.1. Social Sector	2.2. Productivity Sector	2.3. Infrastructure	2.4. Irrigation System	3. Money Value	4. ER Needs	5.1. TR Needs
Villages Affected & Damaged on Infrastructure:	0						
National/Provincial/Town Road (m) - Flooded:	0						
National/Provincial Road (m) - Damaged:	0						
National/Provincial/Town Road (m) - Destroyed:	0						
Rural Road (m) - Flooded:	2900						
Rural Road (m) - Damaged:	1833						
Rural Road (m) - Destroyed:	1067						

## View Map Tab

## View a Blank Map or Highlight on the Map

## Steps in Viewing Map

To view the blank map or highlight on the map, follow these steps:

- 1) **On Query Tab**, To view the blank map or highlight on the map, follow these steps:
  - a. Select one or more **Provinces** that you want to highlight on the map
- 2) **On View Data Tab**: Click Serial of the DataCard that has blue color; the detail of DataCard will display.
  - a. The map of Cambodia will display with color highlights of the provinces selected from the Query Tab, or **click** on the name of the provinces to highlight or remove highlight.
  - b. **Double click** the name of a **province** to see the map of districts in that province. **Click** the name of the districts to highlight or remove highlight.
  - c. In the map at district level, **double click** the name of a **district** to see the map of communes in that district. **Click** the name of the communes to highlight remove highlight.
  - d. The map can be **exported** to be an image file by right clicking the map, then choosing **Save image as...**



## Crosstab Tab Crosstab Statistics Table Generating

Crosstab statistics table is a table that has one or more query selection as Horizontal Dimension (Column Headings) and one or more query selection as Vertical Dimension (Row Heading).

### Steps in Crosstab Statistics Table Generating

Crosstab statistics table is a table that has one or more query selections as Horizontal Dimension (Column Headings) and one or more query selections as Vertical Dimension (Row Heading).

#### 1) On Query Tab, make criteria selections:

- Select one or more Disaster Type. Use Ctrl + Click for multi selections.
- Select one or more Provinces or Districts or Communes. Use Ctrl + Click for multi selections.
- Define date range: From (YYYY-MM-DD) and To: (YYYY-MM-DD) e.g.

Date range: (YYYY MM DD)  
 From: 2000    To: 2013

#### 2) On Crosstab Tab, add or remove Variables needed to be displayed in the statistics table from Available Box to Selected Box by using

or  button.

Region: Cambodia - [kh855] Statistics Generator:  
 Select the columns you want to appear in your report:

Available	Selected
Losses \$USD	# DataCards
Losses \$Local	Deaths
Education centers	Injured
Hospitals	Houses Destroyed
Damages in crops Ha.	Houses Damaged
Lost Cattle	Victims
Damages in roads Mts	Relocated
Duration (d)	Evacuated
With Deaths	
With Injured	
With Missing	
With Houses Destroyed	

#### 3) On Crosstab Tab, define Crosstab Dimension: Select one Selected Query as **Horizontal Dimension** (Column Heading), select one Selected Query as **Vertical Dimension** (Row Heading). **Example:** Generate crosstab statistics table by taking three events: Fire, Flood and Storm as Horizontal Dimension and Province as Vertical Dimension.

Define Crosstab Dimensions:

Vertical Dimension:	Horizontal Dimension:
Event	Event
Province	Province
District	District
Commune	Commune
Date	Year

Generate crosstab statistics table of houses damaged and houses destroyed because of fire, flood, river bank collapse or storm from 2009 to 2013.

### Solution:

#### 1) Query Tab:

- a. **Disaster Type:** Use Ctrl + Click to select the type of disaster above: Fire, Flood, Storm of River Bank Collapse.
- b. **Province:** Leave all the provinces not selected, which will mean all the provinces are selected.
- c. **Date Range:** From: 2009 To: 2013

#### 2) Crosstab Tab:

- a. **Select Variable:** House Damaged and House Destroyed
- b. **Vertical Dimension:** Province
- c. **Horizontal Dimension:** Event
- d. Click the  button to generate the Crosstab Statistics Table as defined above, click on the link: [get it as Excel](#) to export the table to Microsoft Excel.

The screenshot shows the 'Crosstab Generator' window in CamDi. The interface is divided into several sections:

- Region:** Cambodia - [kh855]
- Select the columns you want to appear in your report:**
  - Available:** A list of variables including # DataCards, Deaths, Injured, Missing, Victims, Affected, Relocated, Evacuated, Losses \$USD, Losses \$Local, Education centers, and Hospitals.
  - Selected:** A list containing 'Houses Damaged' and 'Houses Destroyed', with a circled '1' next to the list header.
  - Buttons: 'Add >>', 'Remove <<', 'Up', 'Down', 'Top', 'Bottom', and 'Expert'.
- Please define Statistic Functions to produce:**
  - Checked:  Sum
  - Unchecked:  Average,  Maximum,  Variance,  Standard Deviation
- Define Crosstab Dimensions:**
  - Vertical Dimension:** A list containing 'Event', 'Province', 'District', 'Commune', and 'Date', with a circled '2' next to the list header.
  - Horizontal Dimension:** A list containing 'Event', 'Province', 'District', 'Commune', and 'Year', with a circled '3' next to the list header.
  - A circled '4' is placed over the 'Continue' button at the bottom.

Statistics generated for Cambodia - [kh856]									
Event		Fire		Flood		River Bank Collapse		Storm	
Province	Code	Houses Damaged	Houses Destroyed	Houses Damaged	Houses Destroyed	Houses Damaged	Houses Destroyed	Houses Damaged	Houses Destroyed
Banteay Meanchey	01	2	39	178	10			355	11
Battambang	02	152	335	553	98			3663	1323
Kampong Cham	03	5	94	127	111	34	0	1931	631
Kampong Chhnang	04	1	3	34	40			167	210
Kampong Speu	05	3	18	60	0			395	85
Kampong Thom	06	7	19	92	53			634	139
Kampot	07	0	17	0	0			624	55
Kandal	08	8	72	204	106	182	2	342	348
Kep	23	1	2					64	10
Koh Kong	09	1	9	0	0			330	44
Kratie	10	20	105	422	39			167	56
Mondul Kiri	11	1	88	5	15			15	26
Otdar Meanchey	22	1	197	0	149			224	61
Pailin	24	0	10	416	248			768	213
Phnom Penh	12	67	462	21	0				
Preah Sihanouk	18	3	81	0	0			7	3
Preah Vihear	13	0	116	0	0			465	298
Prey Veng	14	6	93	692	10			555	535
Pursat	15	0	10	16	25			17	17
Ratanak Kiri	16	0	9	169	21			329	35
Siem Reap	17	18	371	58	130			1310	1115
Stung Treng	19	1	4	0	5			0	0
Svay Rieng	20	0	43	83	76			162	49
Takeo	21	0	127	0	24			1899	530
<b>TOTAL</b>		<b>297</b>	<b>2324</b>	<b>3130</b>	<b>1160</b>	<b>216</b>	<b>2</b>	<b>14423</b>	<b>5794</b>



## CONCLUSION

# 3

Using the CamDi End User Manual, data analysis can be made within a range of years or a specific year from 1996 to the present. Data is updated regularly by NCDM. Data analysis can be made specifically based on a query of selected disaster type, geography (provinces, districts and communes), a specific year or range of years, and variables selected in the analysis modules. The expert query selection, not included in this manual as it is complicated for general users, can make query selections based on formula selections on variables. Each section of analysis tool includes steps to generate data analysis, followed by practical exercises and guidance to generate the analysis as requested. The exercises can be used as samples to generate similar data analysis based on specific needs.

The CamDi database is open and accessible to all stakeholders, planners, researchers and relevant technical departments. They can access, retrieve and utilize the data to inform their decisions in managing and reducing the impacts of disasters by raising awareness, education and targeted interventions. The CamDi system was launched for official use in June 2014, and the data is regularly updated. It is open and accessible to the general public at [www.camdi.ncmd.gov.kh](http://www.camdi.ncmd.gov.kh).

A comprehensive disaster loss and damage analysis for Cambodia for the range of years 1996 to 2013 was conducted and published. The analysis report demonstrated the key findings and data analysis on disaster loss and damage to human life, housing, agriculture, infrastructure, irrigation systems, health and education. The analysis report in PDF version can also be downloaded from the CamDi website.

For more details and support on CamDi data analysis please send your enquiry to:

- H.E. Choup Sithan, Advisor to the NCDM (Officer in Charge, CamDi system), email: [sithan.ncdm@yahoo.com](mailto:sithan.ncdm@yahoo.com) or call 012 223567
- Mr. Man Phalla, NCDM Technical Official, email: [shalla\\_man38@yahoo.com](mailto:shalla_man38@yahoo.com) or call 012 252343

For the loss and damage (DesInventar) methodology including technical support please send your enquiry to UNDP Asia-Pacific Regional Centre:

- Mr. Rajesh Sharma (Programme Specialist) email: [rajesh.sharma@undp.org](mailto:rajesh.sharma@undp.org) or call +66 2 304 9100 Ext: 2680
- Mr. Pairach Homtong (Disaster Inventories Associate) email: [pairach.homtong@undp.org](mailto:pairach.homtong@undp.org) or call +66 2 304 9100 Ext: 2154

Or contact UNDP Cambodia for more information.

- Mr. Sophon Hum, DRR – Project Coordinator, email: [sophon.hum@undp.org](mailto:sophon.hum@undp.org) or call 099 890898
- Mr. Sophal Sam, Disaster MIS Officer, email: [sophal.sam@undp.org](mailto:sophal.sam@undp.org) or call 012 789836





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Resilient nations.*

