

**Impact Analysis  
of  
International Aid  
through  
Web GIS**

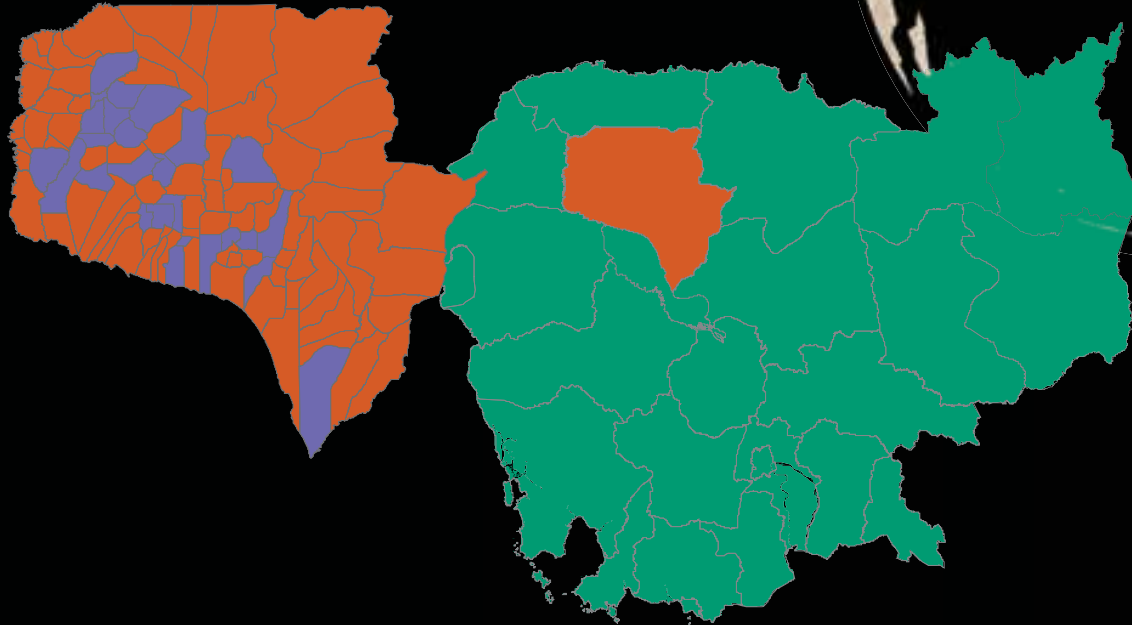
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# Siem Reap, Cambodia



65%  
of rural Cambodians  
have access to  
safe water

# Pump Wells & Bio Sand Water Filters



# Donations Fund Projects

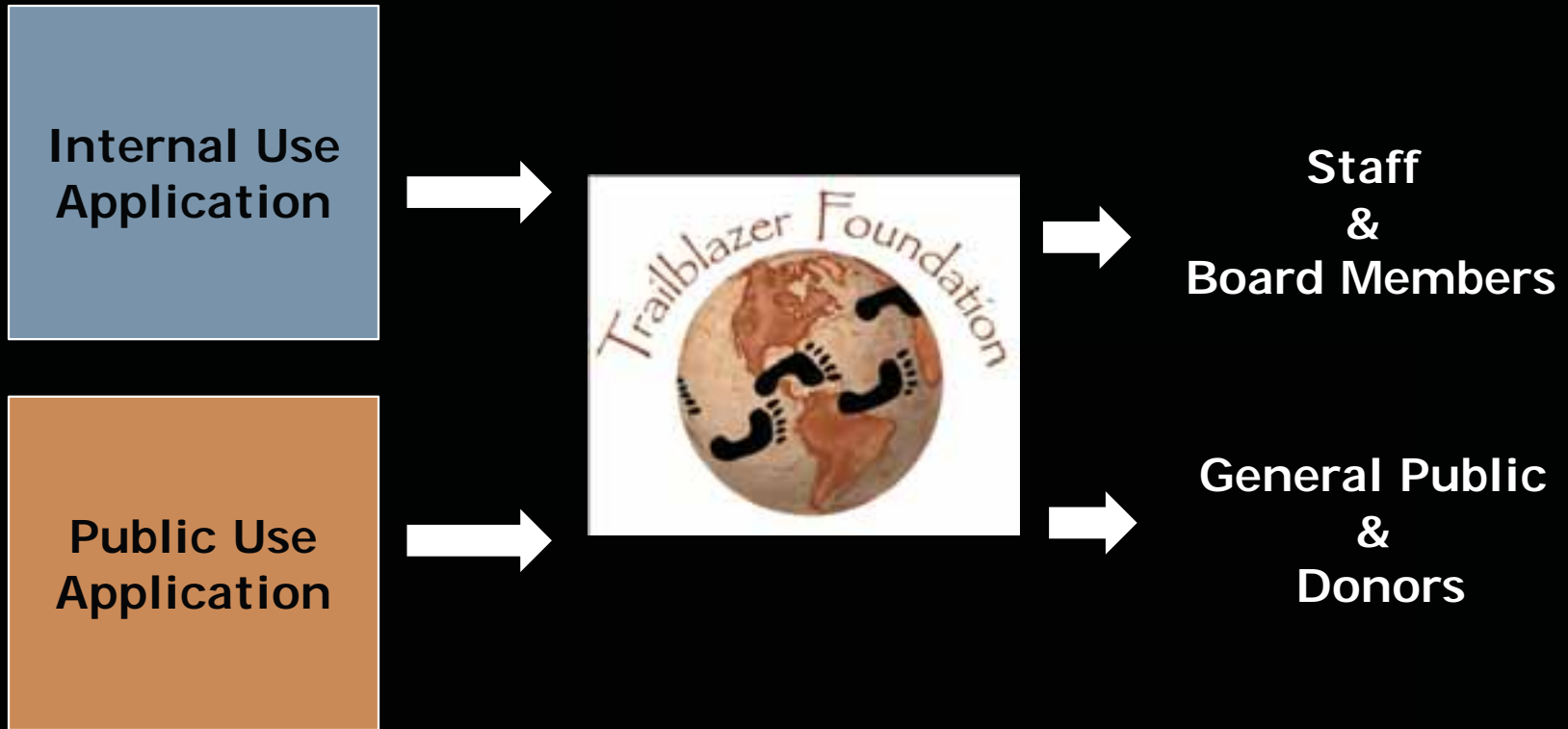


Web

GIS



# The Users





# Database Development



Impact Analysis

Information Sharing

# Survey Data

**Baseline**

+ 5 Years

**Follow  
Up**

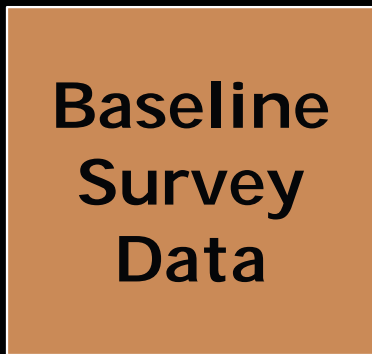
# Variables

## Number of Vehicles/Transportation

VillageCode	Date	Name	VillagerName	VillagerContact	Village	Commune			
	NumberBicycle	NumberMoto	NumberTruck	NumberOxcart	NumberChicke	NumberDuck	NumberCow	NumberBuffalc	
Child3	Child4	TotalBeneficia	NumberFamilie	NumberMales	NumberFemale	AverageDailyIn	TypeHouse		
Am	Odor	WellTypeAfter	WellNumber	DateStartDrilling	DateCompleteDrilling	DepthOfWell	SoilCondRock		
District	DonorPrivateP	ProjectType	GPSY	GPSX	ExistingWaterS	BSFNumber	WaterColor		
	SoilCondHRock	SoilCondSand	SoilCondClay	NumFamSick	Diarrhea	OtherSickness	Child1	Child2	
Understanding	LocationUse	TrainingCompr	HaveInstructio	NumberSachet	rCow	NumberBuffalc	NumberPig		
	Number of Be	NumberPeople	NumberFemale	NumberSachet	NumberSachetsRemaining				
	TotalBeneficia	NumberFamilie	NumberMales	NumberFemale					

# Follow Up Survey Data

Random Values



Designed Proportions

# Impact Analysis

Variable	Baseline	Follow Up	Difference
Transportation	1.19	1.65	0.46**
Livestock	4.60	5.07	0.47**
Store Food	772.50	821.25	48.75**
Sickness	11%	4%	7%*
Diarrhea	30%	23%	7%*

\* = Significant

# Application Development

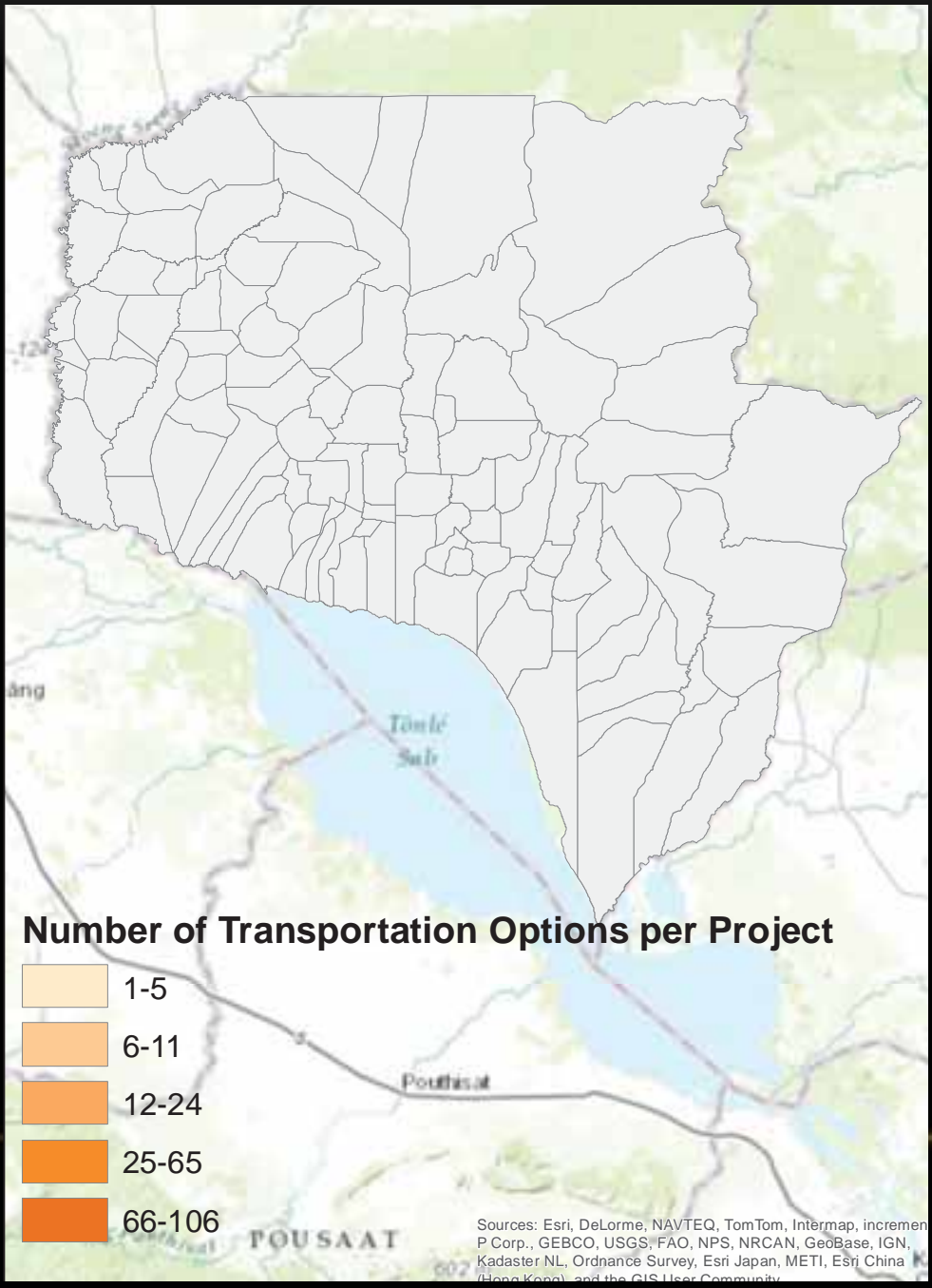
Aggregated  
Data



Individual  
Project  
Data







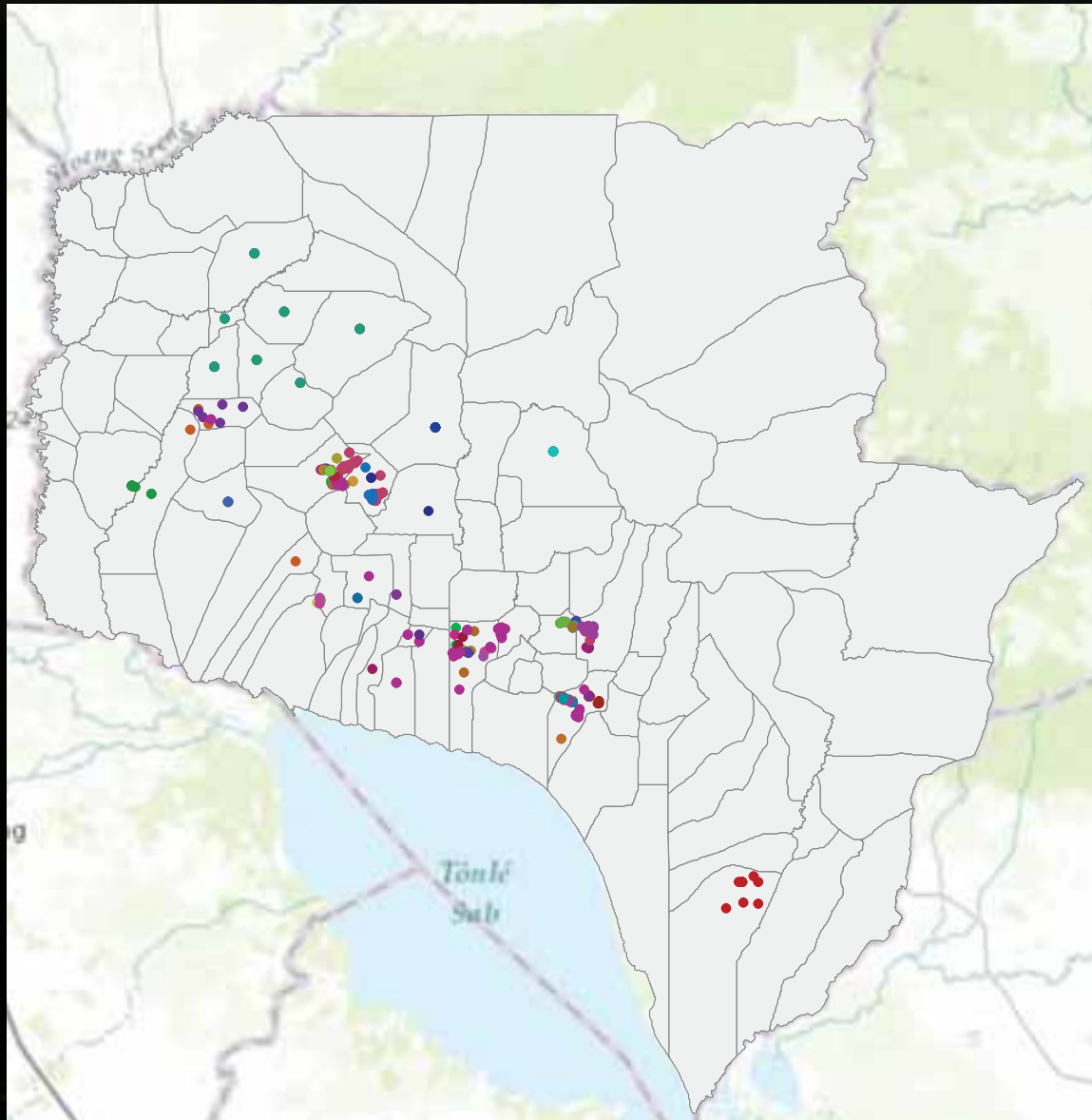
### Number of Transportation Options per Project

- 1-5
- 6-11
- 12-24
- 25-65
- 66-106

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

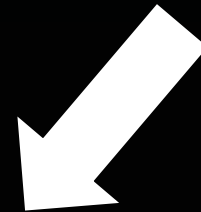
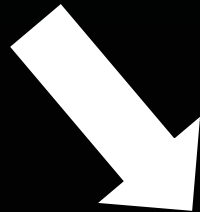




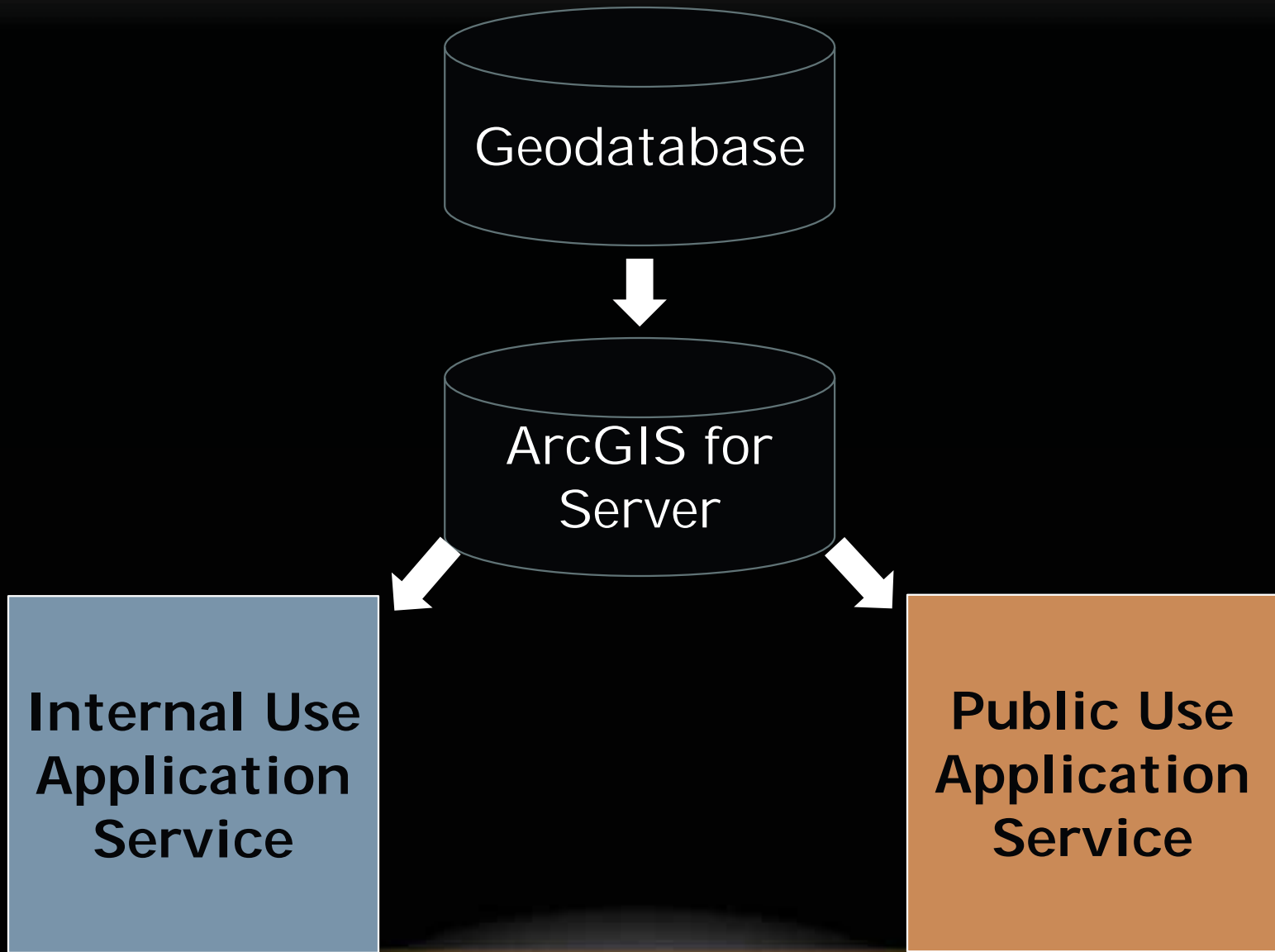


**Individual  
Project  
Data**

**Aggregated  
Data**



**Geodatabase**



**Internal Use  
Application  
Service**

**Public Use  
Application  
Service**



**Web Applications**

# Public Application Functionality

- Labels
  - Label the Communes
- Info Templates
  - Show survey results before & after
- Radio Buttons
  - Toggle between survey results

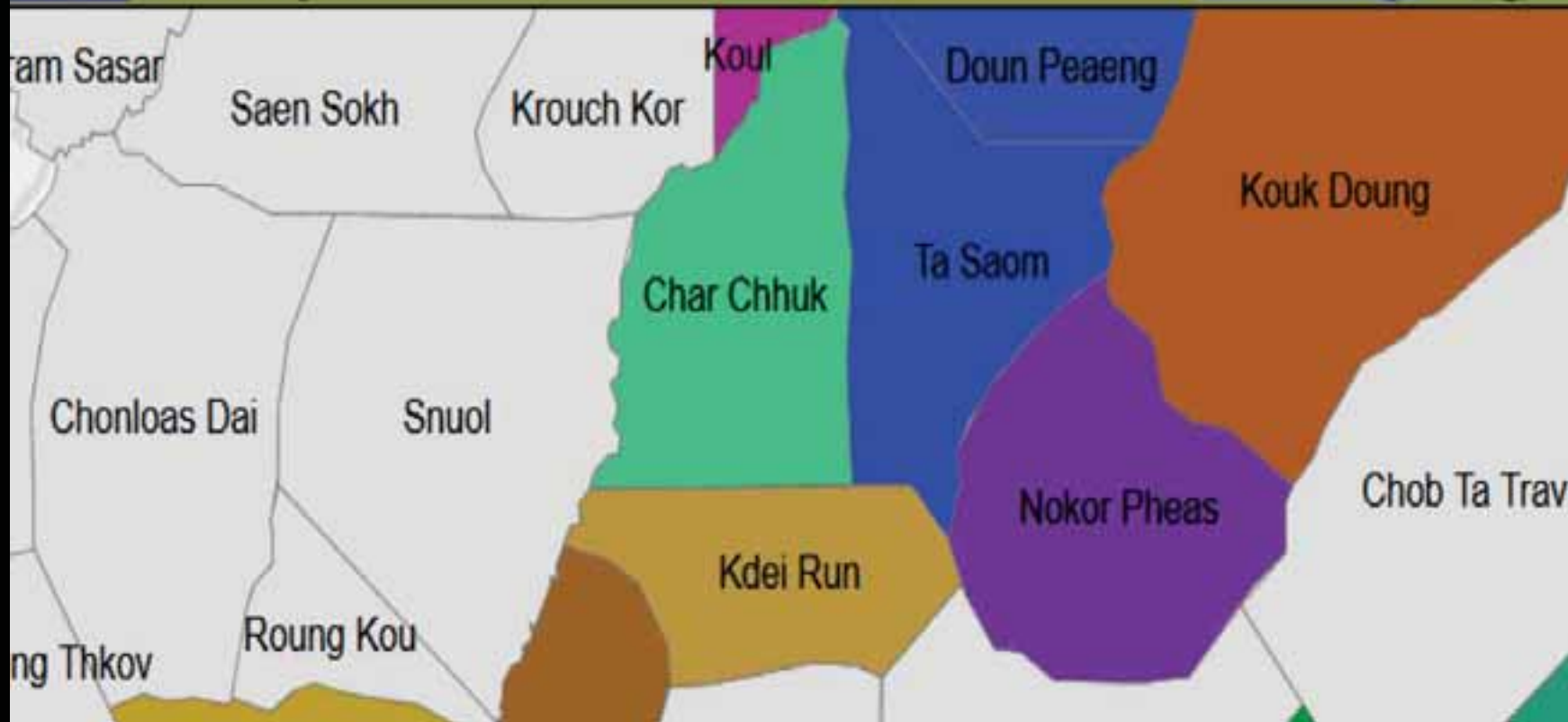
lication shows the work of the Trailblazer Foundation in Siem Reap, Cambodia. *For help*

[Survey](#)

Result you would like to view:

Total Livestock

[Food Storage](#) (kg)



# Internal Application Functionality

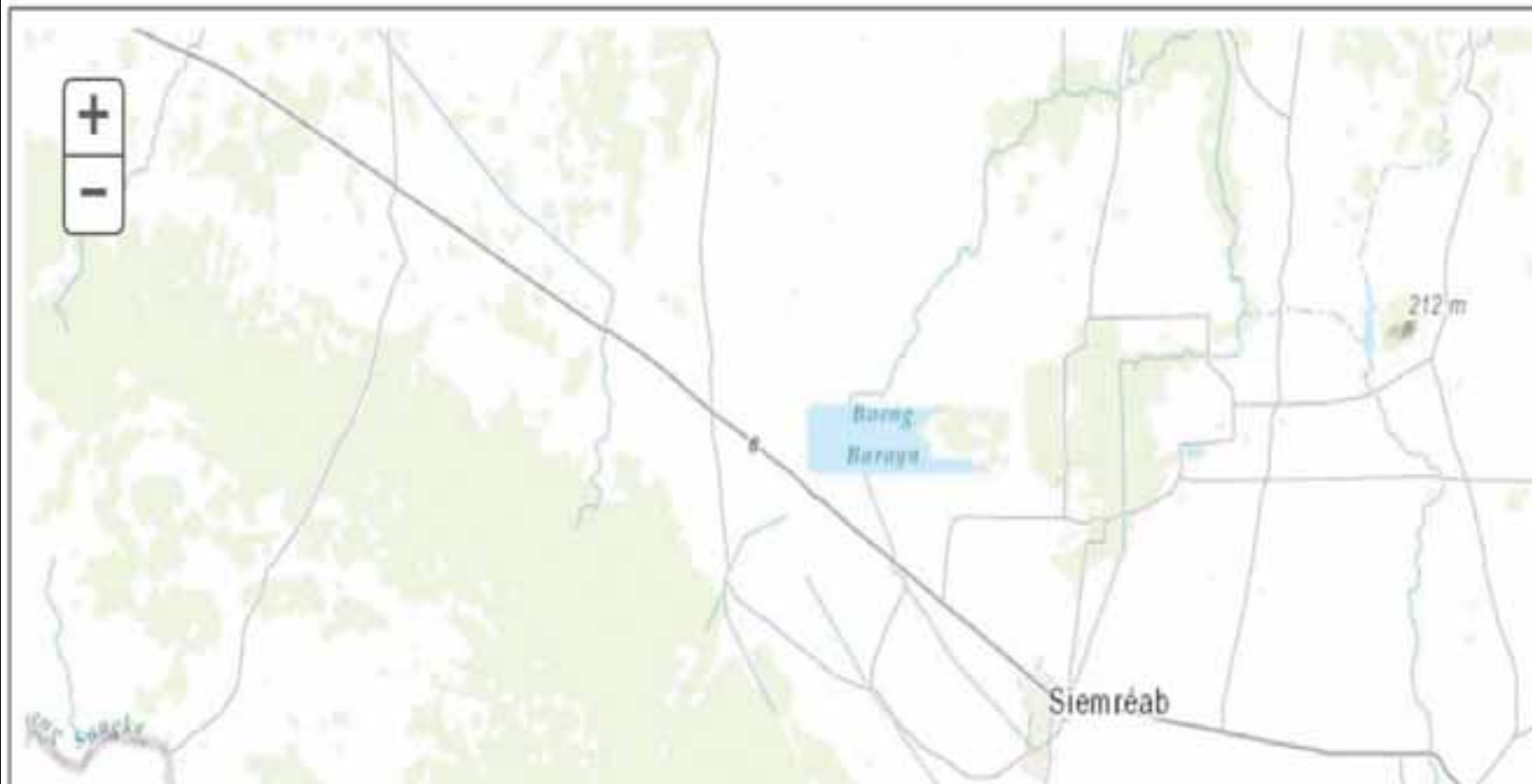
- Search Functionality
  - Project Year, Type & Donor Name
- Data Grid
  - Individual Projects



Search by Donor Organization or Year:

I

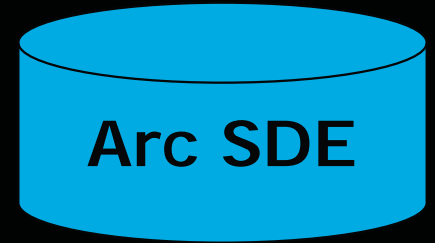
Search



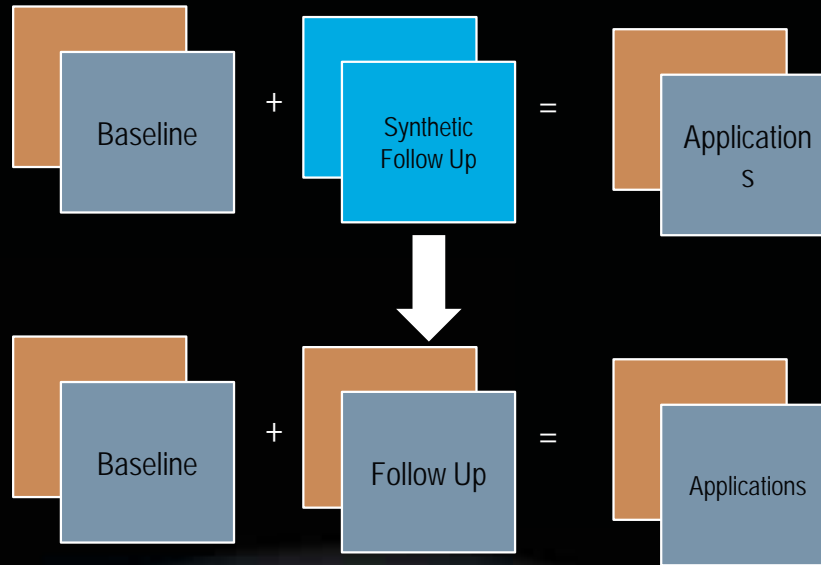
# Mobile Application



# Next Steps



## Replace Synthetic Data with Real Data



CLEAN WATER



HEALTHY LIFE

# THANK YOU

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