Data Journalism Process

A Walkthrough a story production process

What is Data Journalism?

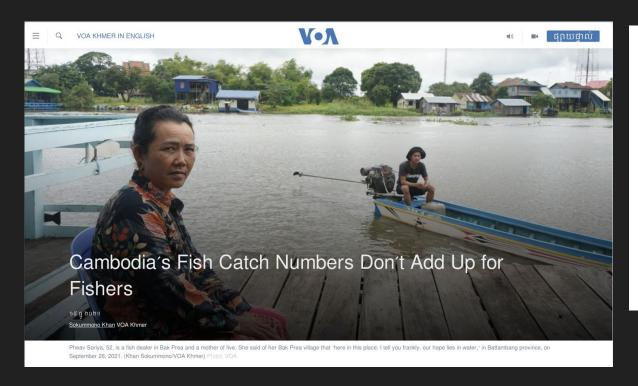
Any explainer or investigative story that is largely driven by data.

It concerns the practice of journalism with regard to the harness of data to produce the story.

It concerns primarily the synthesis between data and traditional reporting.

Spend 10 mins reading this story

https://khmer.voanews.com/a/cambodia-s-fish-catch-numbers-don-t-add-upfor-fishers/6354788.html





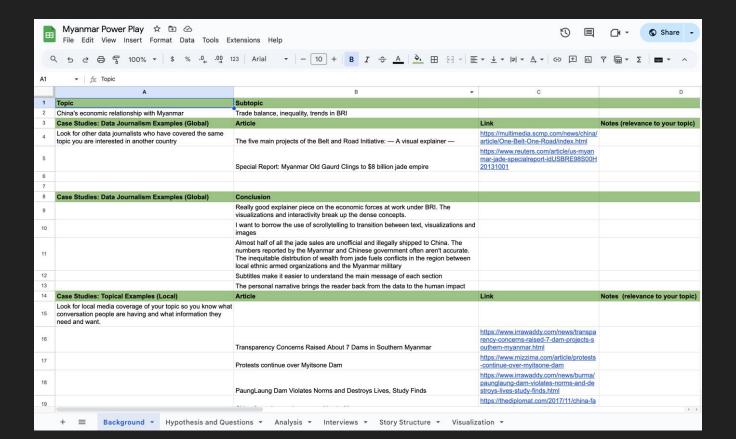
Here are common angles of data stories:

- **Scale:** Tells how big a problem is
- Change: Things that are going up, going down, aren't happening
- Ranking and outliers: Who's the best? The worst? Unusual?
- Variation: Is distribution equal? "Postcode lottery," heatmaps
- Explore: Tools and interactivity (ex: Take this quiz)
- Relationships: Correlation, causation, network analysis
- **Problem and solutions:** Bad data, no data, "get" the data

How is a data story produced?

```
Background/context
Data
Hypothesis
Interview data
Humanize data
Data-driven interview
```

Introduction to Masterfile



Data sets in tutorials



Data sets in the wild



Introduction to Masterfile

- Data journalism can get messy.
- The Masterfile is a Google Doc or sheet that will help you keep your investigation organized, transparent and reproducible.
- The Masterfile is your ticket to writing a successful data-driven story.
- The Masterfile helps keep your investigation focused on producing a "data-driven" not a "data decorated" story.
- The Masterfile enables collaboration, transparency and reproducibility, which are essential for data journalism.
- The Masterfile can be difficult to use the first time, but in the long-run, it enables you to produce quality data stories on deadline.

Components of Masterfile



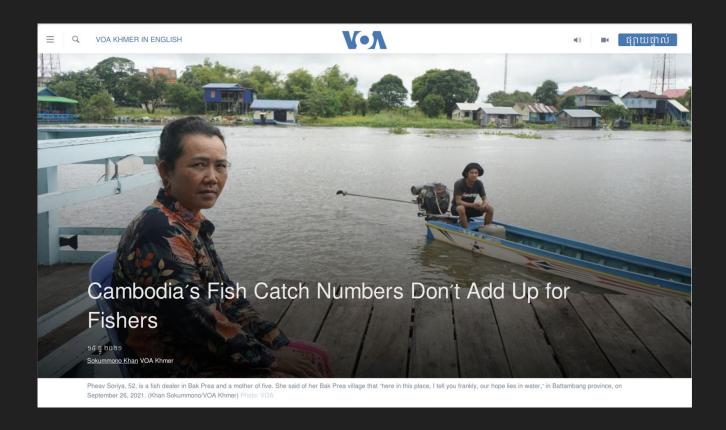
- Background
- Hypothesis and Questions
- Analysis
- Interviews
- Story Structure
- Visualization

Walk through a Masterfile



Masterfile: https://docs.google.com/spreadsheets/d/1CutZxzORPorUBnKXDI2fZ7FV_KOJvSLAUqktOkhj2TA/edit?usp=sharing

Get back to this story



Topic: Cambodia fishery resources

Subtopic: Inland fishery decline

Data journalism examples:

- Troubled waters: Why Pasir Gudang rivers are dying
- <u>Drowning in plastic: Visualising the world's addiction to plastic</u>
 <u>bottles</u>
- Born to fly: The life, journey, and trials of a migratory bird

Local media coverages:

- Cambodian farmers can no longer rely on the Tonle Sap lake
- Cambodia's dwindling fish stocks put spotlight on changing rivers
- A River Drained: Fish, Rice, and Food Security in the Mekong
- Cambodia's biggest lake is running dry, taking forests and fish with it (2020)

Researches/ reports:

- Conserving Mekong Megafishes: Current Status and Critical Threats in Cambodia
- Imperiled Giant Fish Mainstream Dams Lower Mekong Basin
 Status Threats Mitigation
- Have fish catches been declining in the mekong river basin?

Data:

- National Institute of Statistics:
 - Cambodia Socio-Economic Survey
 - Cambodia Inter-Censal Agriculture Survey 2019
- Food and Agriculture Organization:
 - Fish catches
 - Aquaculture production
- Fishery administration
 - Fish catches

Hypothesis

"Despite fish catch has been reported as increasing, fishermen are increasingly abandoning fishing activities for better job or aquaculture due to lower fish catch yields."

Hypothesis

Questions to prove the hypothesis:

- How is the trend of fish catch between 2000-2019?
- How is the trend of the share of household with fishing activities between 2009 and 2019?
- How is the trend of aquaculture production between 2000-2020?
- How many families in Cambodia have adopted aquaculture in 2019?

Lab: answering the questions

- FAO global capture production (1950-2019)
- Cambodia socio-economic survey (2009-2020)
- Cambodia inter-censal agricultural survey 2019
- Cambodia aquaculture production (2000-2020)

Global capture production

	1. FAO: Global Capture File Edit View Insert			☆ 🗅 🛆						5	□ •	Share •
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A1	▼ fix Country (Name)											
	D	E	F	G	Н	1	J	К	L	М	N	0
1	FAO major fishing area (Name)	FAO major fishing area	Unit (Name)	[1950]	S	[1951]	s	[1952]	S	[1953]	s	[1954]
2	Atlantic, Southwest	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
3	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
4	Asia - Inland waters	Inland waters	Tonnes - live weight	0			0 .		0 .		0 .	(
5	Asia - Inland waters	Inland waters	Tonnes - live weight	16600		166	00	19	100	19	900	20700
6	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
7	Pacific, Western Central	Marine areas	Tonnes - live weight	3400		34	00	3	900	4	100	4300
8	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
9	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
10	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
11	Asia - Inland waters	Inland waters	Number	0			0 .		0 .		0 .	(
12	Atlantic, Southeast	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
13	Asia - Inland waters	Inland waters	Tonnes - live weight	0			0 .		0 .		0 .	(
14	Asia - Inland waters	Inland waters	Tonnes - live weight	8000		80	00	8	000	8	000	10000
15	Asia - Inland waters	Inland waters	Tonnes - live weight	12100		128	00	28	000	28	000	56000
16	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
17	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
18	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	31100		330	00	72	000	72	000	144000
19	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
20	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
21	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
22	Indian Ocean, Western	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
23	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
24	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
25	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
26	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
27	Asia - Inland waters	Inland waters	Tonnes - live weight	0			0 .		0 .		0 .	(
28	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
29	Pacific, Western Central	Marine areas	Tonnes - live weight	0			0 .		0 .		0 .	(
30	Indian Ocean, Eastern	Marine areas	Tonnes - live weight	0			0 .		0 .		0.	(

Household with fishing activities

	A	В	С	D	E	F	G	Ĥ	1.
1	Number of household	total population	Cambodia	Phnom Penh	Plain zone	Tonle Sap zone	Coastal zone	Plateau/Mountain zone	year
2	Households with fishing activities		1,649.000	3.000	709.000	539.000	131.000	267.000	2,009
3	All households		2,939.000	261.000	1,198.000	89.000	215.000	376.000	2,009
4	Percentage		56.1	1.2	59.1	60.7	60.9	72	2009
5	Households with fishing activities		1,680.000	2.000	739.000	532.000	142.000	265.000	2,010
6	All households		2,917.000	276.000	1,162.000	888.000	213.000	379.000	2,010
7	Percentage		57.6	0.6	63.6	60	66.7	70.1	2010
8	Households with fishing activities		1,695.000	12.000	677.000	611.000	133.000	361.000	2,012
9	All households		3,082.000	329.000	1,183.000	949.000	226.000	395.000	2,012
10	Percentage		55	4	57	64	59	66	2012
11	Households with fishing activities		1,623.000	6.000	691.000	550.000	113.000	263.000	2,013
12	All households		3,162.000	363.000	1,237.000	939.000	223.000	401.000	2,013
13	Percentage		51	2	56	59	51	66	2013
14	Households with fishing activities	15,184.000	1,371.000	5.000	510.000	509.000	109.000	238.000	2,014
15	All households	15,184.000	3,261.000	369.000	1,223.000	998.000	234.000	437.000	2,014
16	Percentage	15,184	42	1.3	41.7	51	46.5	54.5	2014
17	Households with fishing activities	15,405.000	1,492.000	2.000	577.000	554.000	104.000	256.000	2,015
18	All households	15,405.000	3,307.000	388.000	1,243.000	1,033.000	198.000	444.000	2,015
19	Percentage	15,405	45.1	0.5	46.4	53.6	52.6	57.6	2015
20	Households with fishing activities	15,626.000	1,447.000	3.000	538.000	493.000	126.000	287.000	2,016
21	All households	15,626.000	3,390.000	385.000	1,317.000	999.000	238.000	451.000	2,016
22	Percentage	15,626	42.7	0.8	40.8	49.4	53.1	63.6	2016
23	Households with fishing activities	15,848.000	1,352.000	3.000	568.000	447.000	113.000	221.000	2,017
24	All households	15,848.000	3,438.000	377.000	1,336.000	1,026.000	241.000	457.000	2,017
25	Percentage	15,848	39.3	0.9	42.5	43.5	46.8	48.2	2017
26	Households with fishing activities	15,954.000	1,271.000	5.000	440.000	465.000	87.000	274.000	2019-2020
27	All households	15,954.000	3,634.000	531.000	1,282.000	1,050.000	230.000	541.000	2019-2020
28	Percentage	15,954	35	0.9	34.3	44.3	37.7	50.7	2019-2020

Household with aquaculture activities

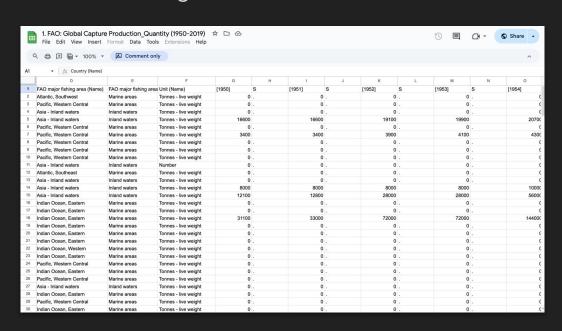
	A	В	С	D	E	F	G	н	1
1	Zone	Province/ Zone	Aquaculture_ Number of holdings reporting aquaculture activity	Aquaculture_ Pond_Number of holdings	Aquaculture_ Pen_Number of holdings	Aquaculture_ Cage_Number of holdings	Aquaculture_ Paddy Field_Number of holdings	Aquaculture_ Culvert/tank/d rum/aquarium _Number of holdings	Aquaculture _Other_Num ber of holdings
2	Plain Zone	Plain Zone	33	31		1	•	•	*
3	Plain Zone	Kampong Cham	1	1		•	*	•	*
4	Plain Zone	Kandal	1	1	•	•	•	•	•
5	Plain Zone	Phnom Penh	•	•	•	•	•	•	•
6	Plain Zone	Prey Veng	13	12	•			•	
7	Plain Zone	Svay Rieng	14	14	•	•	•	•	*
8	Plain Zone	Takeo	2	2	•		•		*
9	Plain Zone	Tboung Khmum	2	1		1	•	•	*
10	Tonle Sap Lake Zone	Tonle Sap Lake Zone	15	7	•	6	•	1	
11	Tonle Sap Lake Zone	Banteay Meanchey	*	•		•			
12	Tonle Sap Lake Zone	Battambang	1	1	•			•	
13	Tonle Sap Lake Zone	Kampong Chhnang	2	1	•	1			
14	Tonle Sap Lake Zone	Kampong Thom	3	1	•	2		•	
15	Tonle Sap Lake Zone	Pursat	3	2	•	1	•	•	
16	Tonle Sap Lake Zone	Siemreap	5	1		2	*	1	*
17	Tonle Sap Lake Zone	Oddar Meanchey	1	1	•				
18	Tonle Sap Lake Zone	Pailin	•	•	•			•	•
19	Plateau and Mountainous Zone	Plateau and Mountainous Zone	1	1	•//			•	
20	Plateau and Mountainous Zone	Kampong Speu	•	•	•			•	
21	Plateau and Mountainous Zone	Kratie		•					
22	Plateau and Mountainous Zone	Mondul Kiri			•				
23	Plateau and Mountainous Zone	Preah Vihear	•	•	•		•	•	
24	Plateau and Mountainous Zone	Ratanak Kiri							*:
25	Plateau and Mountainous Zone	Stung Treng							*
	Total	-	49	39		7			

Cambodia aquaculture production

A1	▼ fix Co	ountry (Name)										
	A	В	С	D	E	F	G	Н	1	J	К	L
1	Country (Name)	ASFIS species (Name)	FAO major fishing ar	FAO major fishin	FAO major fishing area	Detailed product	Unit (Name)	[1950]	[1951]	[1952]	[1953]	[1954]
2	Afghanistan	Cyprinids nei	Asia - Inland waters	4	4	Aquaculture pro	Tonnes - live weight	() ()	0	0 0
3	Afghanistan	Freshwater fishes nei	Asia - Inland waters	4	4	Capture product	Tonnes - live weight	100	100	10	0 10	0 100
4	Afghanistan	Rainbow trout	Asia - Inland waters	4	4	Aquaculture pro	Tonnes - live weight	() ()	0	0 0
5	Albania	Angelsharks, sand devils nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
6	Albania	Atlantic bluefin tuna	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
7	Albania	Atlantic bonito	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
8	Albania	Barracudas nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
9	Albania	Bighead carp	Europe - Inland wate	5	5	Aquaculture pro	Tonnes - live weight	() ()	0	0 0
10	Albania	Bighead carp	Europe - Inland wate	5	5	Capture product	Tonnes - live weight	() ()	0	0 0
11	Albania	Bleak	Europe - Inland wate	5	5	Capture product	Tonnes - live weight	() ()	0	0 0
12	Albania	Blue and red shrimp	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
13	Albania	Blue whiting(=Poutassou)	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
14	Albania	Bluefish	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
15	Albania	Bogue	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
16	Albania	Caramote prawn	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
17	Albania	Catsharks, nursehounds nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
18	Albania	Common carp	Europe - Inland wate	5	5	Aquaculture pro	Tonnes - live weight	() ()	0	0 0
19	Albania	Common carp	Europe - Inland wate	5	5	Capture product	Tonnes - live weight	() (0	0 0
20	Albania	Common cuttlefish	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
21	Albania	Common dace	Europe - Inland wate	5	5	Capture product	Tonnes - live weight	() (0	0 0
22	Albania	Common dentex	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
23	Albania	Common octopus	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
24	Albania	Common sole	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
25	Albania	Common spiny lobster	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
26	Albania	Common squids nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
27	Albania	Croakers, drums nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
28	Albania	Crucian carp	Europe - Inland wate	5	5	Aquaculture pro	Tonnes - live weight	() ()	0	0 0
29	Albania	Crucian carp	Europe - Inland wate	5	5	Capture product	Tonnes - live weight	() ()	0	0 0
30	Albania	Deep-water rose shrimp	Mediterranean and E	13	37	Capture product	Tonnes - live weight	() ()	0	0 0
31		Doofieh eharke noi	Maditarranean and E	12			Tonnos - livo woight	,	,	1	n	0 0

Global capture production

Cleaning data

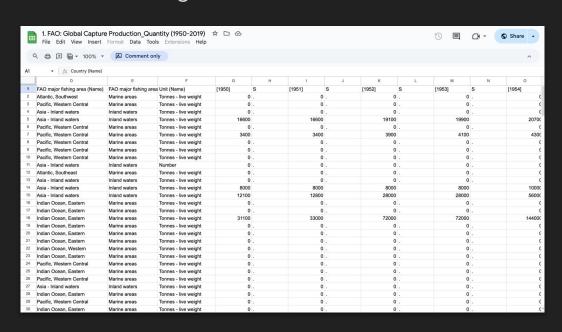


Steps:

- Filter for Cambodia
- Remove unwanted columns
- Filter for desired indicator
- Copy and paste transpose

Global capture production

Cleaning data



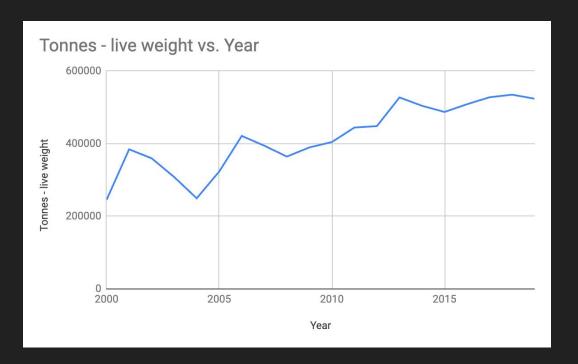


Global capture production

Analyzing data







Household with fishing activities

Cleaning data

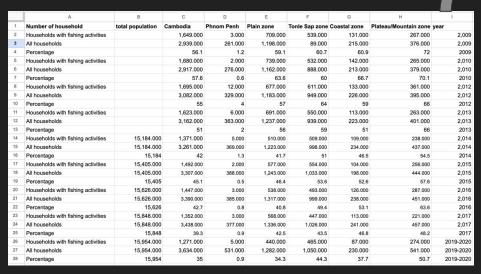
	A	В	С	D	E	F	G	н	1
1	Number of household	total population	Cambodia	Phnom Penh	Plain zone	Tonle Sap zone	Coastal zone	Plateau/Mountain zone	year
2	Households with fishing activities		1,649.000	3.000	709.000	539.000	131.000	267.000	2,009
3	All households		2,939.000	261.000	1,198.000	89.000	215.000	376.000	2,009
4	Percentage		56.1	1.2	59.1	60.7	60.9	72	2009
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26	Households with fishing activities	15,954.000	1,271.000	5.000	440.000	465.000	87.000	274.000	2019-2020
27	All households	15,954.000	3,634.000	531.000	1,282.000	1,050.000	230.000	541.000	2019-2020
28	Percentage	15,954	35	0.9	34.3	44.3	37.7	50.7	2019-2020

Steps:

- Extract data value from each report from 2009 to 2020
- Organize it in a single spreadsheet
- Filter for percentage of household with fishing activities

Household with fishing activities

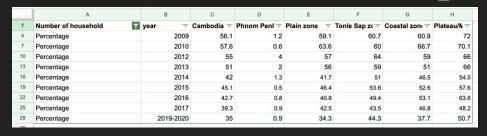
Cleaning data

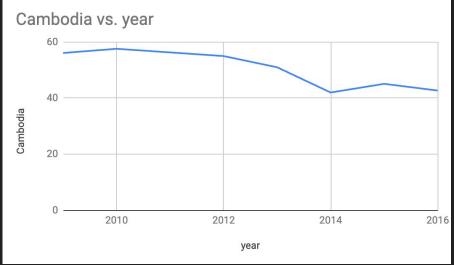


	A	В	С	D	E	F	G	Н
- 1	Number of household	year =	Cambodia =	Phnom Pent =	Plain zone =	Tonle Sap zc =	Coastal zoni =	Plateau/N =
4	Percentage	2009	56.1	1.2	59.1	60.7	60.9	72
7	Percentage	2010	57.6	0.6	63.6	60	66.7	70.1
10	Percentage	2012	55	4	57	64	59	66
13	Percentage	2013	51	2	56	59	51	66
16	Percentage	2014	42	1.3	41.7	51	46.5	54.5
19	Percentage	2015	45.1	0.5	46.4	53.6	52.6	57.6
22	Percentage	2016	42.7	0.8	40.8	49.4	53.1	63.6
25	Percentage	2017	39.3	0.9	42.5	43.5	46.8	48.2
28	Percentage	2019-2020	35	0.9	34.3	44.3	37.7	50.7
20								

Household with fishing activities

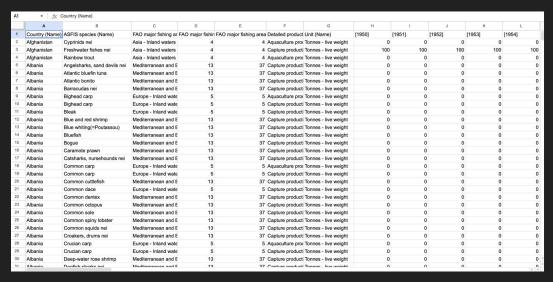
Analyzing data





Cambodia aquaculture production

Cleaning data



Steps:

- Filter for Cambodia
- Filter aquaculture production (freshwater fish)
- Sum of all value for each year
- Copy and paste transpose

Cambodia aquaculture production

Cleaning data

A1	→ fc C	ountry (Name)										
	A	В	С	D	E	F	G	Н	T.	J	К	L
1	Country (Name)	ASFIS species (Name)	FAO major fishing ar	FAO major fishin I	FAO major fishing area	Detailed product	Unit (Name)	[1950]	[1951]	[1952]	[1953]	[1954]
2	Afghanistan	Cyprinids nei	Asia - Inland waters	4	4	Aquaculture pro	Tonnes - live weight		0 () (0
3	Afghanistan	Freshwater fishes nei	Asia - Inland waters	4	4	Capture product	Tonnes - live weight	10	0 100	100	100	100
4	Afghanistan	Rainbow trout	Asia - Inland waters	4	4	Aquaculture pro	Tonnes - live weight		0 () () (0
5	Albania	Angelsharks, sand devils nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
6	Albania	Atlantic bluefin tuna	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
7	Albania	Atlantic bonito	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
8	Albania	Barracudas nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 0) () (0
9	Albania	Bighead carp	Europe - Inland wate	5	5	Aquaculture pro	Tonnes - live weight		0 0) () (0
10	Albania	Bighead carp	Europe - Inland wate	5	5	Capture product	Tonnes - live weight		0 0) (0
11	Albania	Bleak	Europe - Inland wate	5	5	Capture product	Tonnes - live weight		0 0) (0
12	Albania	Blue and red shrimp	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 0) (0
13	Albania	Blue whiting(=Poutassou)	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () (0
14	Albania	Bluefish	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
15	Albania	Bogue	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
16	Albania	Caramote prawn	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
17	Albania	Catsharks, nursehounds nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
18	Albania	Common carp	Europe - Inland wate	5	5	Aquaculture pro	Tonnes - live weight		0 () () (0
19	Albania	Common carp	Europe - Inland wate	5	5	Capture product	Tonnes - live weight		0 () () (0
20	Albania	Common cuttlefish	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
21	Albania	Common dace	Europe - Inland wate	5	5	Capture product	Tonnes - live weight		0 () () (0
22	Albania	Common dentex	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
23	Albania	Common octopus	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () (0
24	Albania	Common sole	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 0) () (0
25	Albania	Common spiny lobster	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 0) () (0
26	Albania	Common squids nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
27	Albania	Croakers, drums nei	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
28	Albania	Crucian carp	Europe - Inland wate	5	5	Aquaculture pro	Tonnes - live weight		0 () () (0
29	Albania	Crucian carp	Europe - Inland wate	5	5	Capture product	Tonnes - live weight		0 0) () (0
30	Albania	Deep-water rose shrimp	Mediterranean and E	13	37	Capture product	Tonnes - live weight		0 () () (0
		Doofieh eharke noi	Maditarranaan and E	12			Tonnoe liuo uninht		0 /	,		



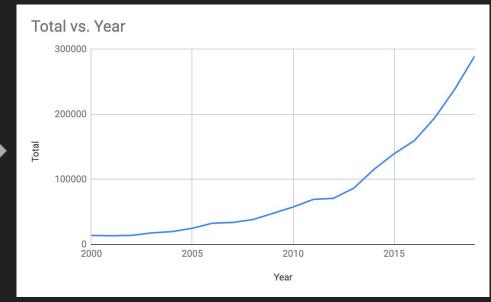
	A	В
1	Year	Total
2	2000	14002
3	2001	13463
4	2002	14133
5	2003	17886
6	2004	19900
7	2005	25000
8	2006	32800
9	2007	33900
10	2008	38350
11	2009	47965
12	2010	57780
13	2011	69380
14	2012	71030
15	2013	86590
16	2014	115535
17	2015	139630
18	2016	159668
19	2017	194280
20	2018	238610
21	2019	290180
22		

Cambodia aquaculture production

Cleaning data

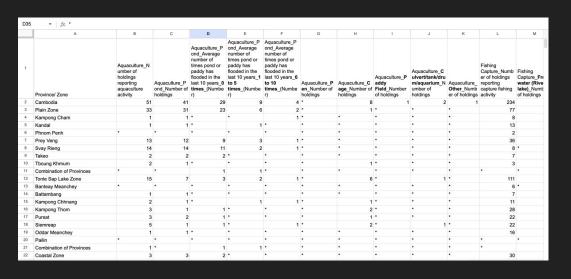
	A	В	
1	Year	Total	
2	2000	14002	
3	2001	13463	
4	2002	14133	
5	2003	17886	
6	2004	19900	
7	2005	25000	
8	2006	32800	
9	2007	33900	
10	2008	38350	
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12	2010	57780	
13	2011	69380	
14	2012	71030	
15	2013	86590	
16	2014	115535	
17	2015	139630	
18	2016	159668	
19	2017	194280	
20	2018	238610	
21	2019	290180	
22			





Household with aquaculture activities

Cleaning data



Steps:

- Remove unwanted columns
- Reorganize structure of the records

Household with aquaculture activities

Cleaning data

D35	▼ fx *												
	A	В	C	D	E	F	G	н	1	J	К	L	M
	Province/ Zone	aquaculture activity	Aquaculture_P ond_Number of holdings	ond_Average number of times pond or paddy has flooded in the last 10 years_0 times_(Numbe r)	to 5 times_(Numbe r)	r)	Aquaculture_P en_Number of holdings	Aquaculture_C age_Number of holdings		m/aquarium_N umber of holdings	Aquaculture_ Other_Numb er of holdings	capture fishing activity	Capture_Fre water (Rive lake)_Numb of holdings
	Cambodia	51	41					8				1 23	
	Plain Zone	33	31	23								7	
	Kampong Cham	1	1		•				•	•			8
5	Kandal	1	1		1		•					1	3
	Phnom Penh	•			•	•	•						2
7	Prey Veng	13	12	9	3	1						3	6
8	Svay Rieng	14	14	11	2								8 *
9	Takeo	2	2	2									7
10	Thoung Khmum	2	1					1					3
11	Combination of Provinces			1	1								
12	Tonle Sap Lake Zone	15	7	3	2	1		6				11	1
13	Banteay Meanchey												6 *
14	Battambang	1	1										7
15	Kampong Chhnang	2	1		1	1		1				1	1
16	Kampong Thom	3	1	1				2				2	8
	Pursat	3	2	1				1				2	2
18	Siemreap	5	1	1		1		2				2	2
19	Oddar Meanchev	1	- 1			•						1	6
20	Pailin												
21	Combination of Provinces	1		1	1								
22	Coastal Zone	3	3	2								3	0

3 Plai 4 Plai 5 Plai 6 Plai 7 Plai 8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl	ain Zone ain Zone ain Zone ain Zone	Province/ Zone Plain Zone Kampong Cham	Aquaculture_ Number of holdings reporting aquaculture	Aquaculture_ Pond_Number of holdings	Aquaculture_ Pen_Number of holdings	Aquaculture_ Cage_Number	Aquaculture_ Paddy Field Number	rum/aquarium	Aquaculture Other_Num
3 Plai 4 Plai 5 Plai 6 Plai 7 Plai 8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl	ain Zone ain Zone ain Zone	Kampong Cham	33			of holdings	of holdings	_Number of holdings	ber of holdings
4 Plai 5 Plai 6 Plai 7 Plai 8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl	ain Zone ain Zone			31	•	1	•		
5 Plai 6 Plai 7 Plai 8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl	ain Zone		1	1					
6 Plai 7 Plai 8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl		Kandal	1	1					
7 Plai 8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl		Phnom Penh							
8 Plai 9 Plai 10 Tonl 11 Tonl 12 Tonl	ain Zone	Prey Veng	13	12					
9 Plai 10 Tonl 11 Tonl 12 Tonl	ain Zone	Svay Rieng	14	14			•		
10 Toni 11 Toni 12 Toni	ain Zone	Takeo	2	2					
11 Toni	ain Zone	Thoung Khmum	2	1		1			
12 Toni	nle Sap Lake Zone	Tonle Sap Lake Zone	15	7		6		1	
	nle Sap Lake Zone	Banteay Meanchey							
	nle Sap Lake Zone	Battambang	1	1					
13 Tonl	nle Sap Lake Zone	Kampong Chhnang	2	1		1			
14 Tonl	nle Sap Lake Zone	Kampong Thom	3	1		2			
15 Tonl	nle Sap Lake Zone	Pursat	3	2		1	•		
16 Tonl	nle Sap Lake Zone	Siemreap	5	1	•	2		1	
17 Tonl	nle Sap Lake Zone	Oddar Meanchey	1	1					
18 Toni	nle Sap Lake Zone	Pailin							
19 Plat	ateau and Mountainous Zone	Plateau and Mountainous Zone	1	1			•		
20 Plat	ateau and Mountainous Zone	Kampong Speu							
21 Plat		Kratie							
22 Plat	ateau and Mountainous Zone	Mondul Kiri							
23 Plat	ateau and Mountainous Zone	Preah Vihear							
24 Plat	ateau and Mountainous Zone	Ratanak Kiri							
25 Plat		Stung Treng							
26 Tota									
27	ateau and Mountainous Zone		49	39		7			

Answers

Questions	Answers
How is the trend of fish catch between 2000-2019?	Fish catch has been increased dramatically from about 240000 tonnes in 2000 to about 520000 in 2019.
How is the trend of the share of household with fishing activities between 2009 and 2019?	Share of household with fishing activities were decreasing from 56% in 2009 to 35% in 2019.
How is the trend of aquaculture production between 2000-2020?	Aquaculture production has been increased exponentially from 14000 tonnes in 2000 to 290000 tonnes in 2020.
How many families in Cambodia have adopted aquaculture in 2019?	There were 49 000 households adopted aquaculture in 2019.

DEMO: Interview data