


ENVIRONMENT STATISTICS



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Outline

- 1. Background – Environment Statistics (ES)**
- 2. SEEA**
- 3. Water Accounts**
- 4. Energy Accounts**

1. Environment Statistics (ES)

- Increase Demand for Statistics
 - ✓ National, International (SDGs), Sector Statistics, Public in General
- PDS Framework 2021-2026
 - ✓ KSO 4: Secured Environment & Climate Change
- Relevant, timely & reliable environmental statistics
- Compilation & Derivation of Environment Indicators
- Respond to Climate Change

1. Environment Statistics

Compilation of **Environmental-Economic Accounts** (SEEA Central Framework)

Water Accounts

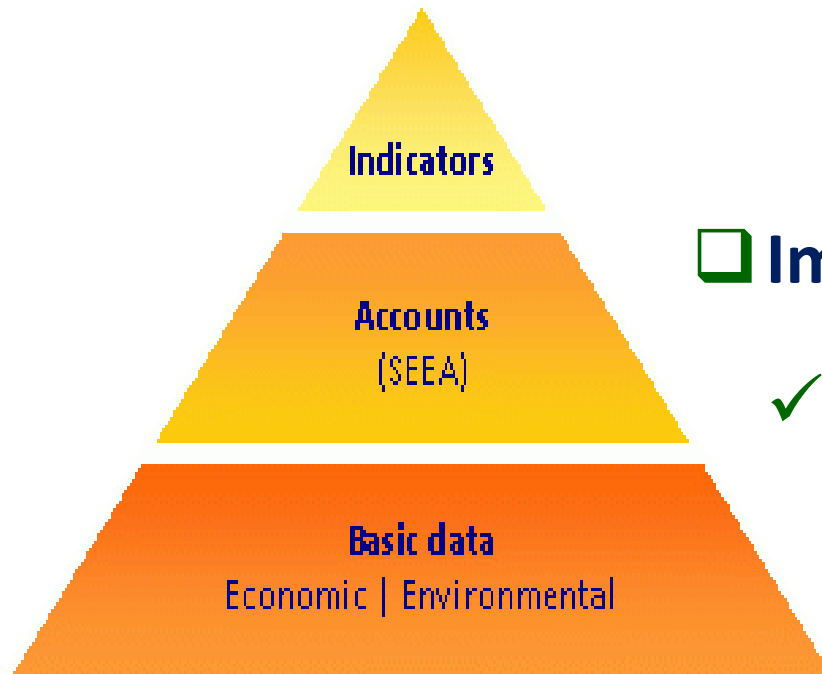
Energy Accounts



2. SEEA

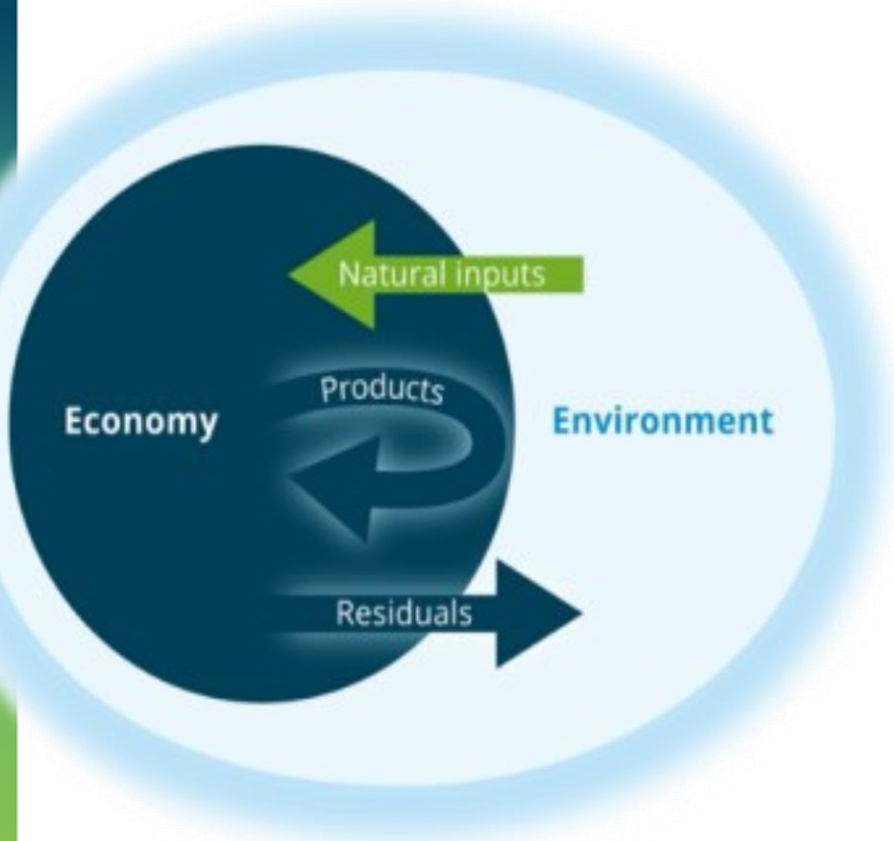
□ SEEA – System of Environmental Economic Accounting

- ✓ SEEA Central Framework – International Statistical Standard 2012 (UN)



□ Importance ?

- ✓ Organizes environmental and economic information in a common framework



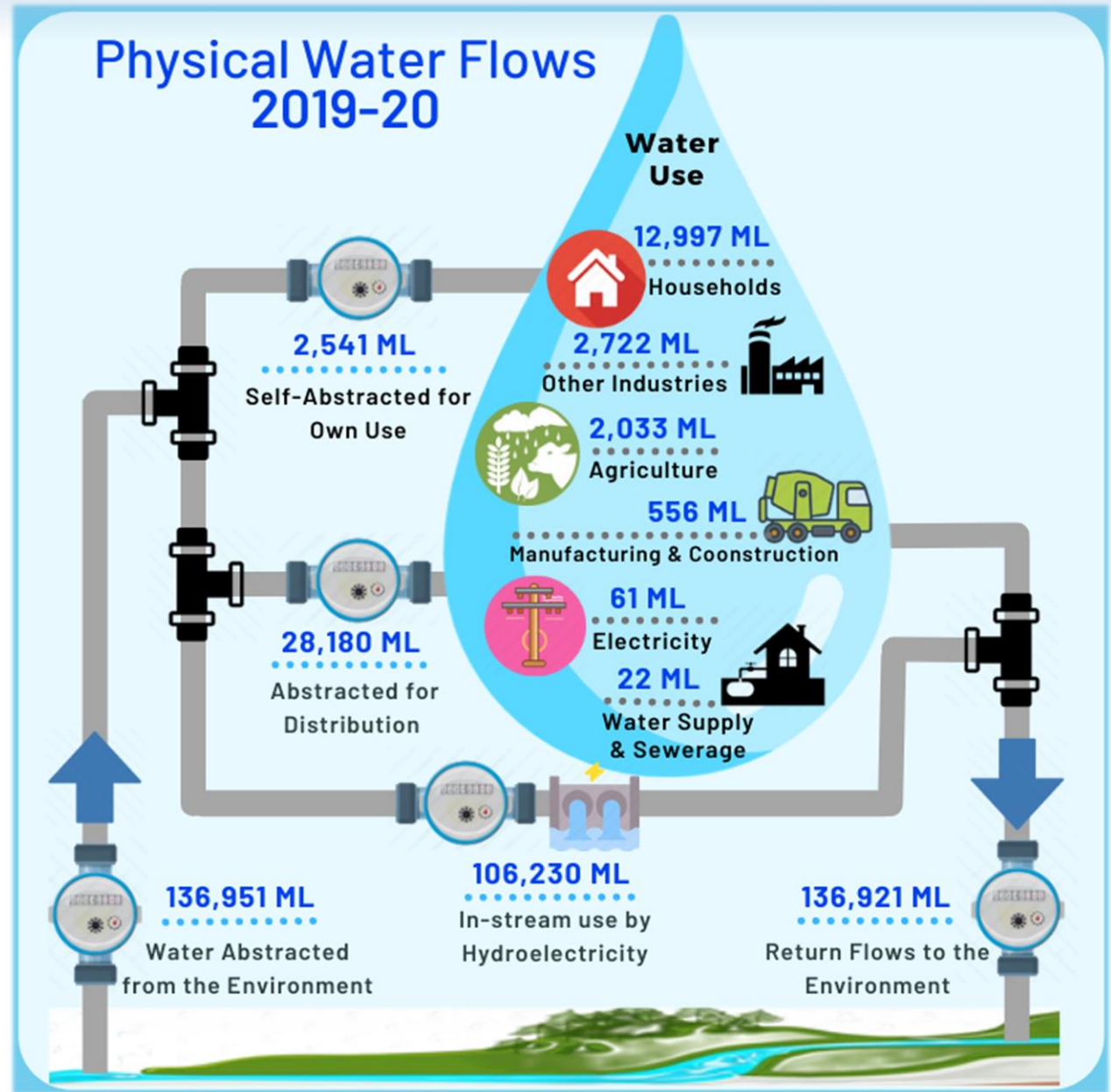
❑ Water Accounts

- ✓ Consistent statistical framework for water
- ✓ Understanding **Interaction** between Environment & Economy

❑ Water Aggregates & Indicators

- ✓ Environmental - Water Abstraction
- ✓ Social - Water Use by Households
- ✓ Economic – Water Use Per Capita

3. SEEA – Water

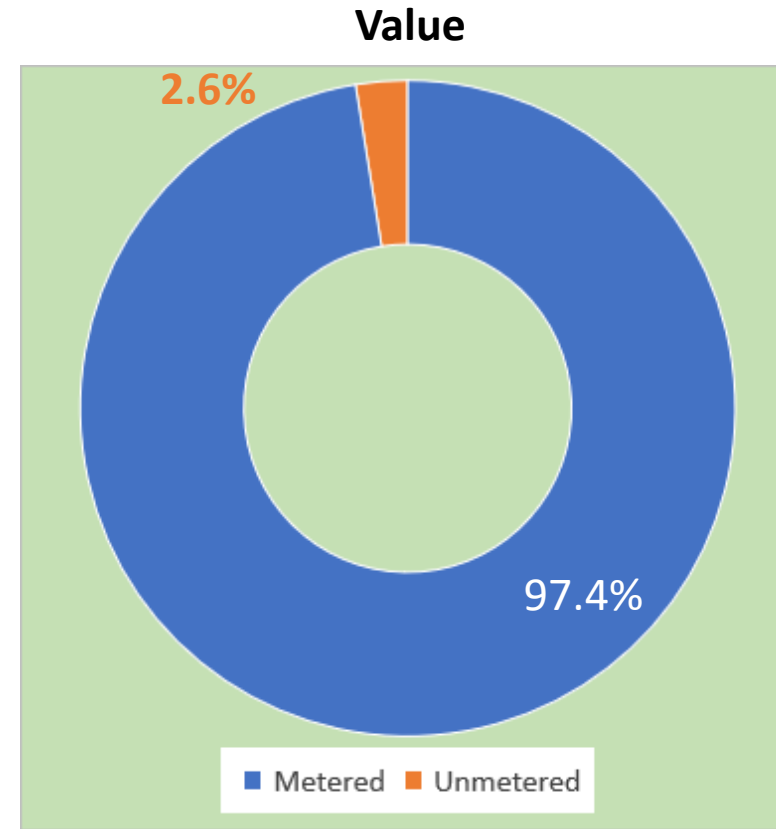
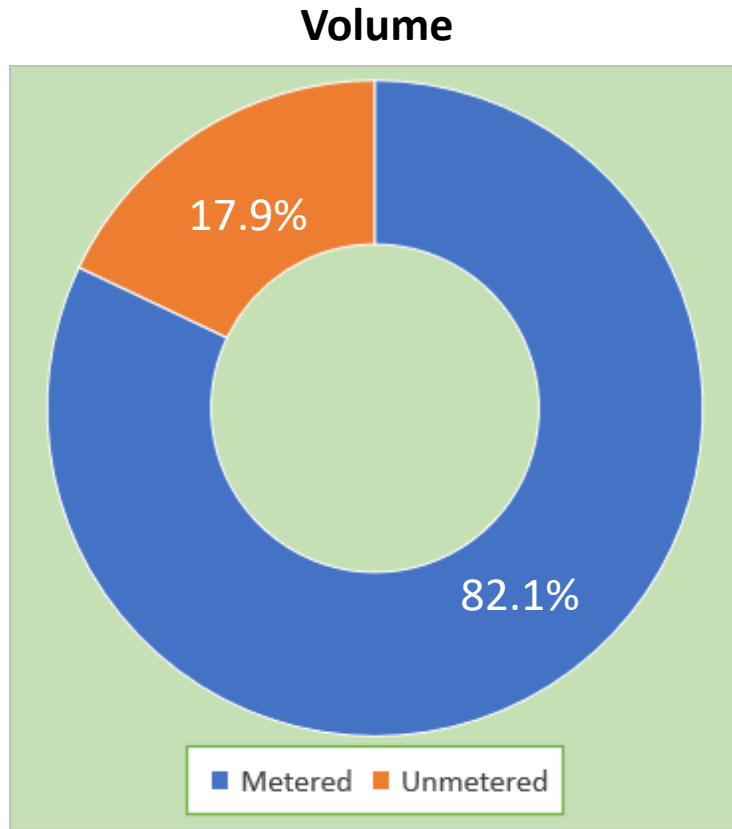


3. SEEA – Water Indicators

	Unit	2015-16	2016-17	2017-18	2018-19	2019-20
Total Water Abstraction	ML	101,836	82,530	114,144	163,005.0	136,951
Total Water Use	ML	88,804	71,765	100,372	150,611	124,621
Water use by Industry	ML	75,230	57,771	87,312	137,828	111,624
Water use by Households	ML	13,574	13,994	13,060	12,783	12,997
Total Population	Persons	194,238	195,979	197,611	199,243	202,506
Total number of households	HHs	27,748	28,880	29,060	29,950	30,485
Total # of HHs with Metered Water	HHs	18,768	19,686	19,832	20,737	22,793
Water use per capita	m³	457.2	366.2	507.9	755.9	615.4
Water use per households	m³	489.2	484.6	449.4	426.8	436.4
% of HHs with Metered Water Use	%	67.6	68.2	68.2	69.2	74.8

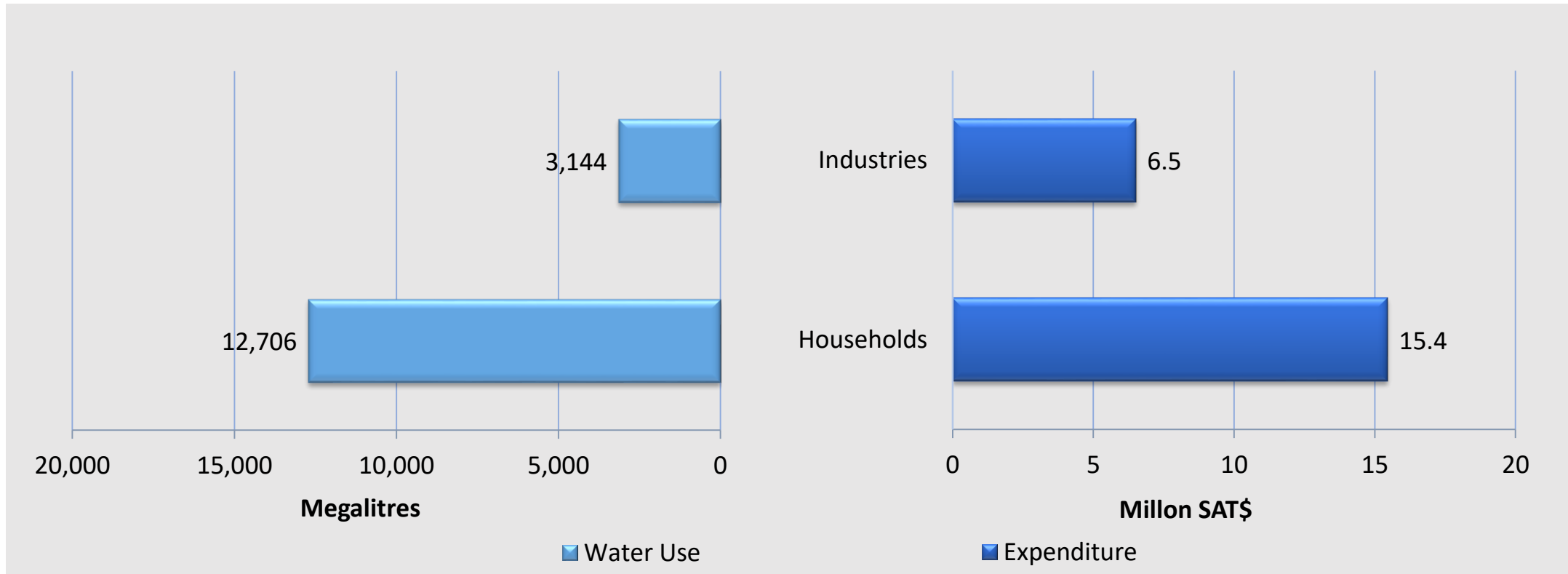
3. SEEA – Water Indicators

Total Volume and Value of Distributed Water Use 2019-20

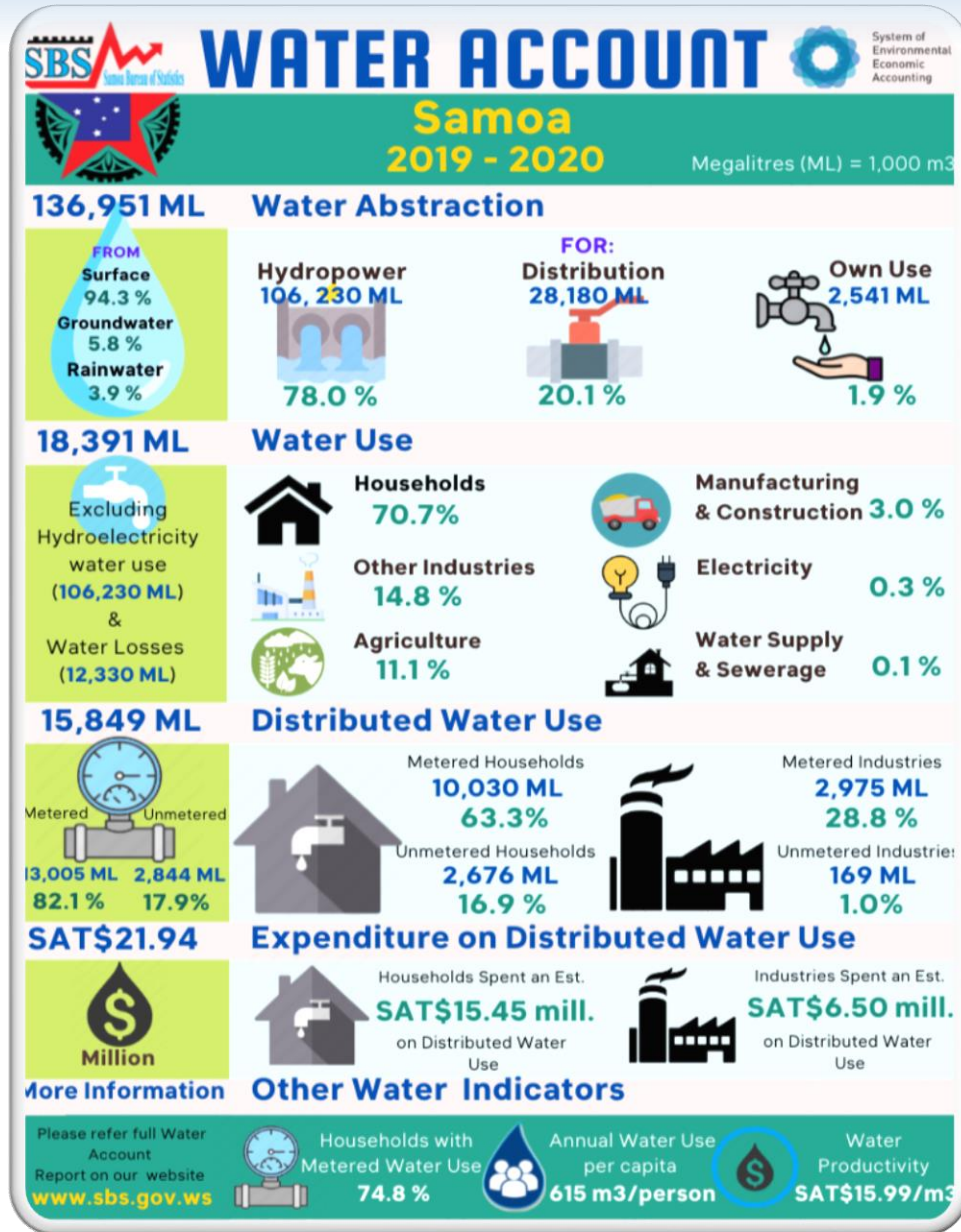


3. SEEA – Water Indicators

Total Distributed Water Use and Expenditure, Samoa 2019-20



3. SEEA – Water Infographics



4. SEEA – ENERGY

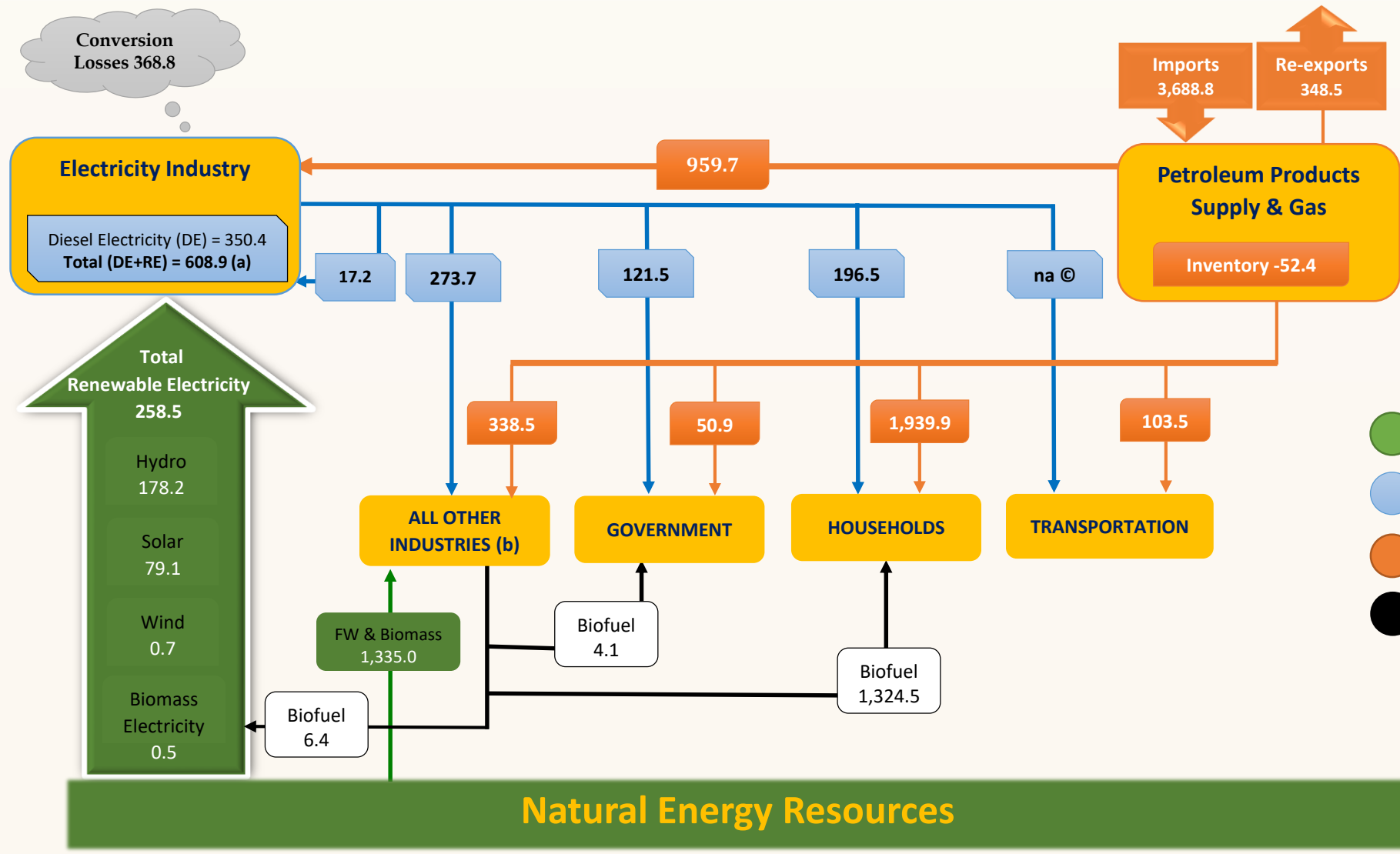


4. Why Energy Accounting?



- Consistent statistical framework for energy.
- Understanding Interaction between the **ENVIRONMENT & ECONOMY**
- Compilation & derivation of indicators
 - ✓ Economic – Energy use per capita, Energy use per unit of GDP
 - ✓ Social - Net domestic energy use (Households Energy Use)
 - ✓ Environmental – Share of Renewable Energy Use
- Compilation and derivation of **SDG indicators** such as ;
 - ✓ **7.2.1** - Energy Intensity
 - ✓ **7.3.1** - Renewable Energy Share in Total Energy Use
- Respond to climate change (compilation of relevant statistics)

4. Physical Energy Flows 2020 (TJ)

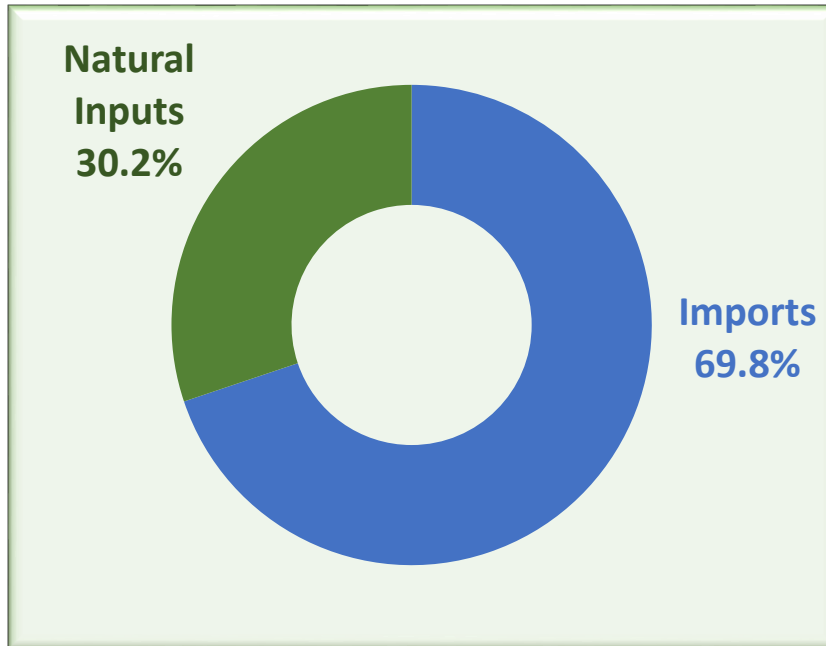


- Renewables
- Electricity
- Fossil Fuel
- Biofuel

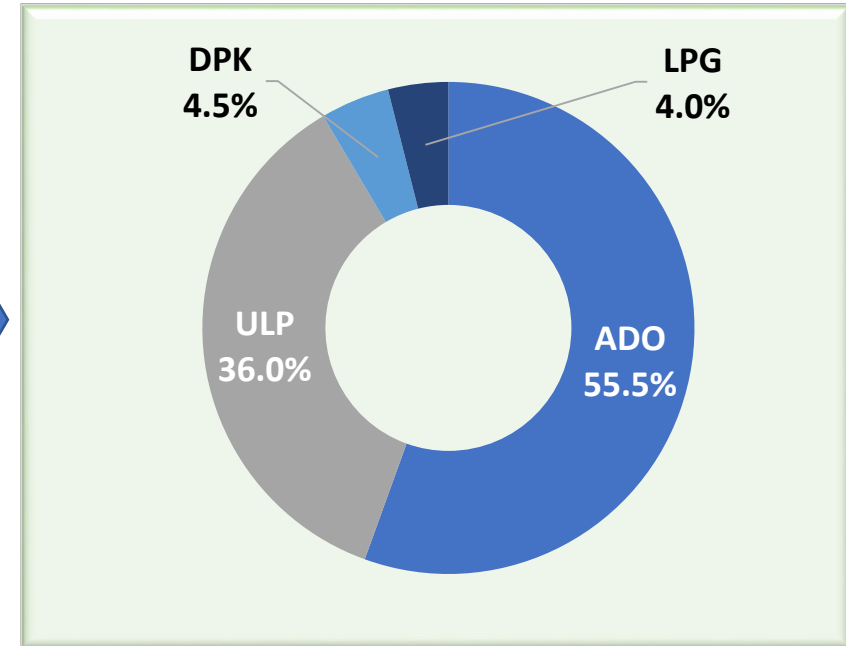
4. Energy Supply



Total Energy Supply by Source, Samoa 2020 %



Imports by energy products, Samoa 2020 %



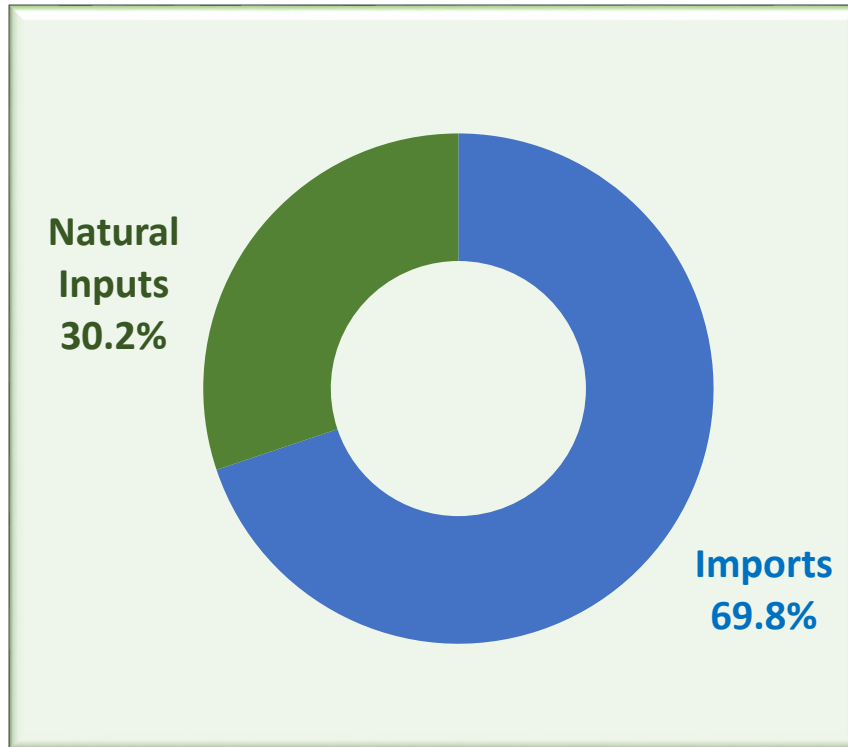
Automotive Diesel Oil (ADO) – dominates total imports 55.5%

Liquified Petroleum Gas (LPG) – the least imported fuel 4.0%

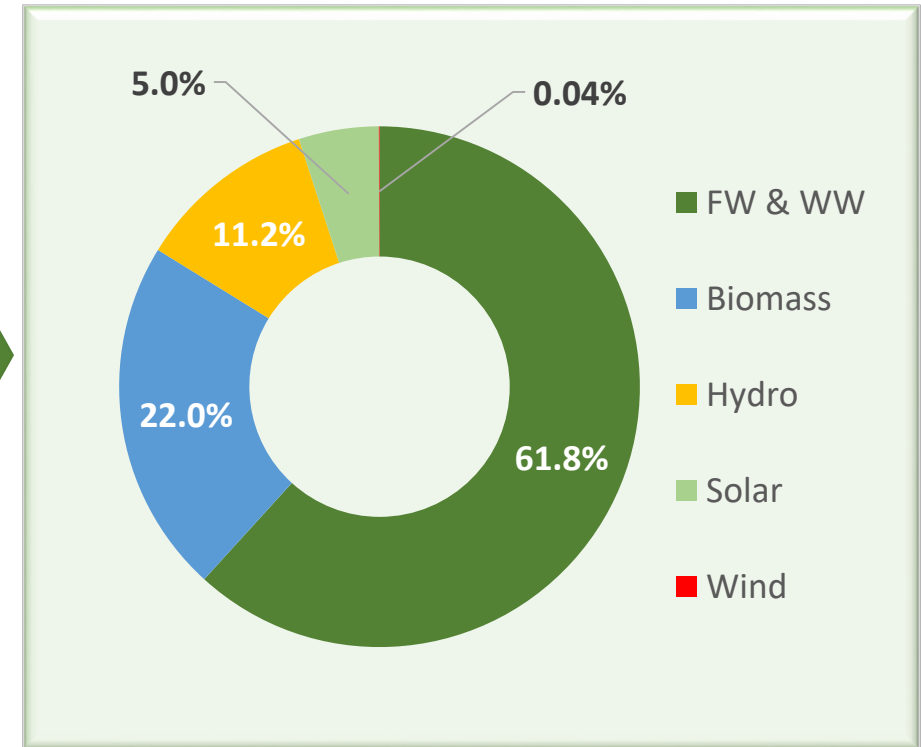
4. Energy Supply



**Total Energy Supply by Source,
 Samoa 2020 %**

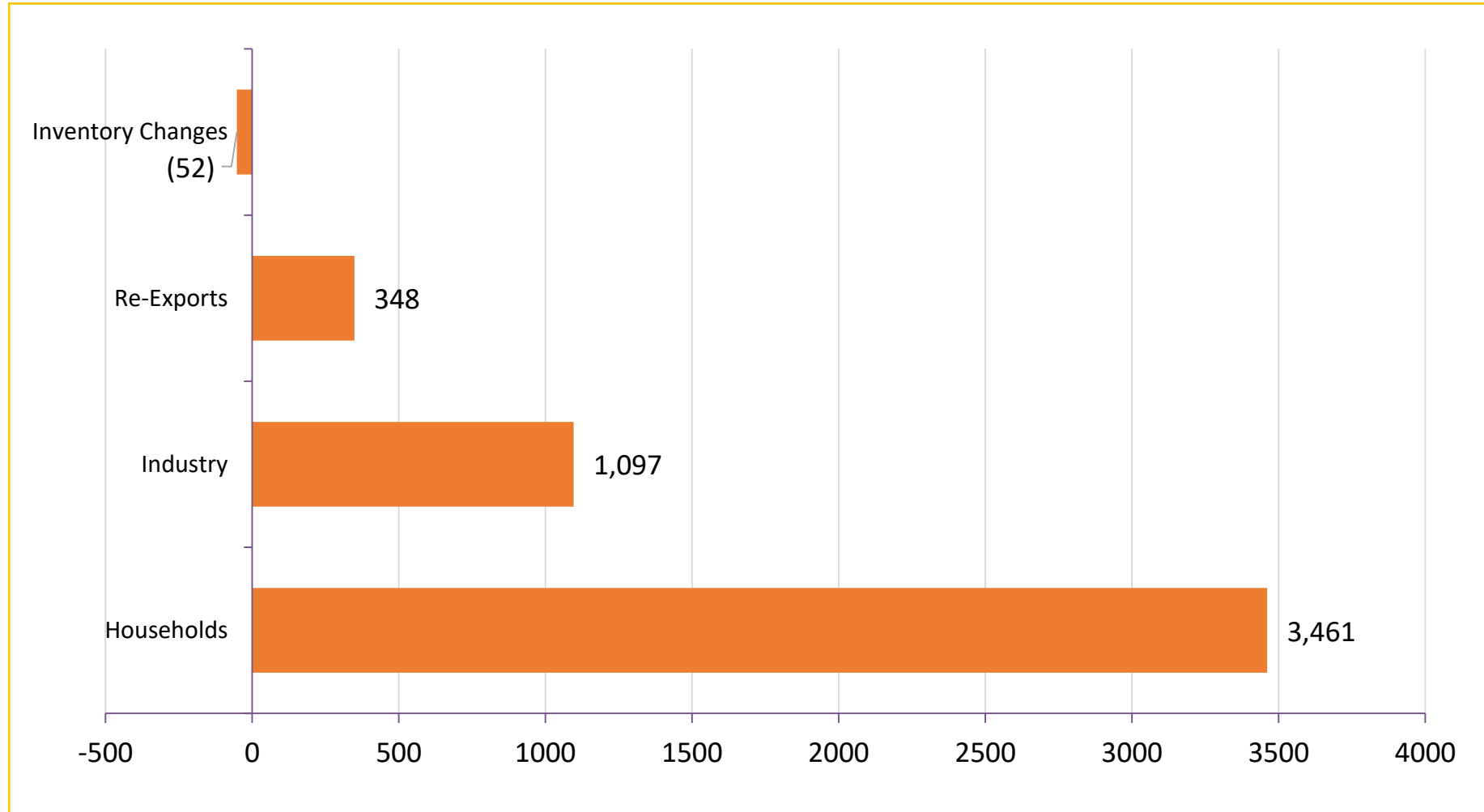


**Natural Inputs from the Environment,
 Samoa 2020 %**

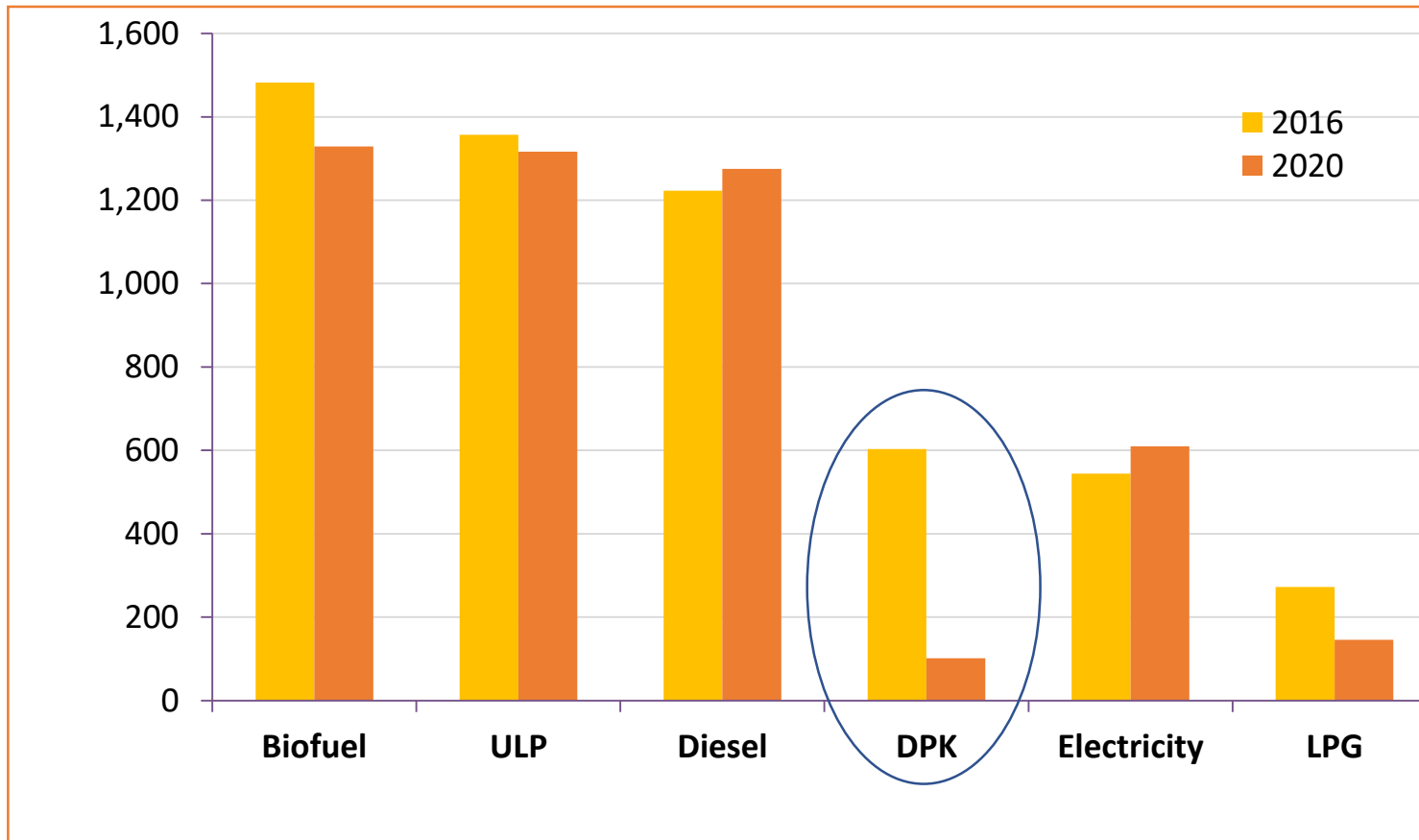


FW & WW: Fuelwood & Woodwaste

Total Energy Use, Samoa 2020 (TJ)



Total Energy Use by Product Type, Samoa 2016 & 2020 (TJ)



DPK

Least use
 energy product
 & most notable
 decline of
 almost

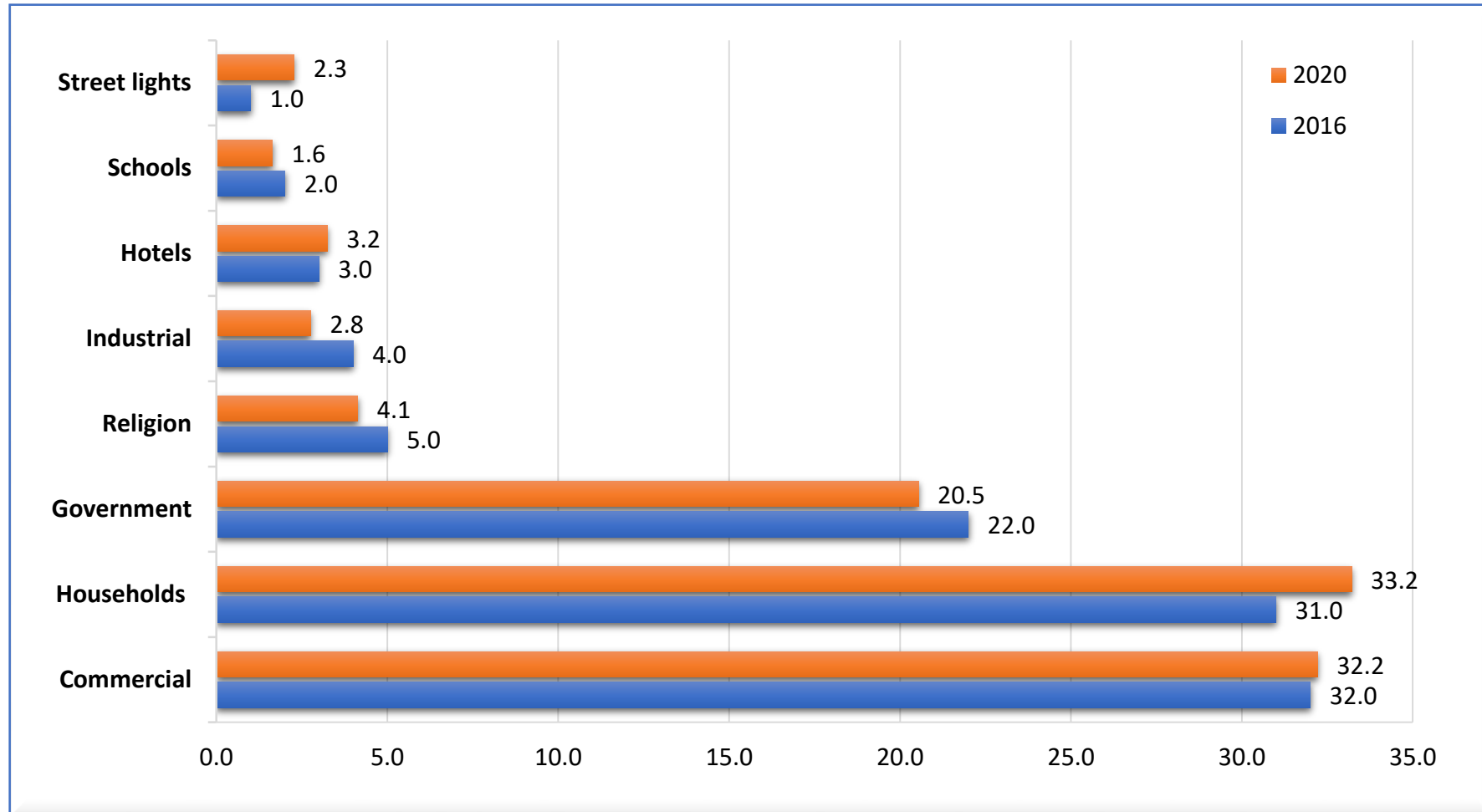
83.3% from 603
 TJ in 2016 to
 101 TJ in 2020

DPK – Dual Purpose Kerosene / Jet Fuel

4. Electricity Use



Percentage of Electricity Use by End Use Customers, Samoa 2016 & 2020



Source: EPC

Note: EPC Customers

4. Climate Change & SDG 7



Energy Related Climate Change Indicators, Samoa

	Unit	2016	2020
Population ^a	No.	195,979	202,506
Gross Domestic Product (GDP) ^b	SAT\$	2,108,588,000	2,063,100,000
Indicators			
Net Domestic Energy Use	TJ	5,371.7	4,985.7
Share of Fossil Fuels in Total Energy Use	%	69.2	68.0
Renewable Energy Share in Total Energy Use by National Economy (SDG 7.2.1)	%	30.8	32.0
Total Energy Intensity of Production Activities of National Economy (SDG 7.3.1)	MJ/GDP	0.8	0.7
Energy Use by Resident Households Per Capita	GJ/Person	18.9	17.1

(a) **Note:** (a) Population Census Year 2016
(b) GDP in Current Prices

**7 AFFORDABLE AND
CLEAN ENERGY**



4. National Target 70 % RE by 2031

Electricity Production by Source, Samoa 2016 & 2020

Electricity Sources	2016 (TJ)	2020 (TJ)	2016 (%)	2020 (%)
Total Diesel Electricity	372.6	350.4	68.5	57.6
Total Renewable Electricity	171.6	258.5	31.5	42.4
Hydro Electricity	117.2	178.2	21.5	29.2
Solar Electricity	54.4	79.1	10.0	13.0
Wind Electricity	0.0	0.7	0.0	0.1
Biomass Electricity	na	0.5	na	0.1
Total Electricity Production	544.3	608.9	100.0	100.0

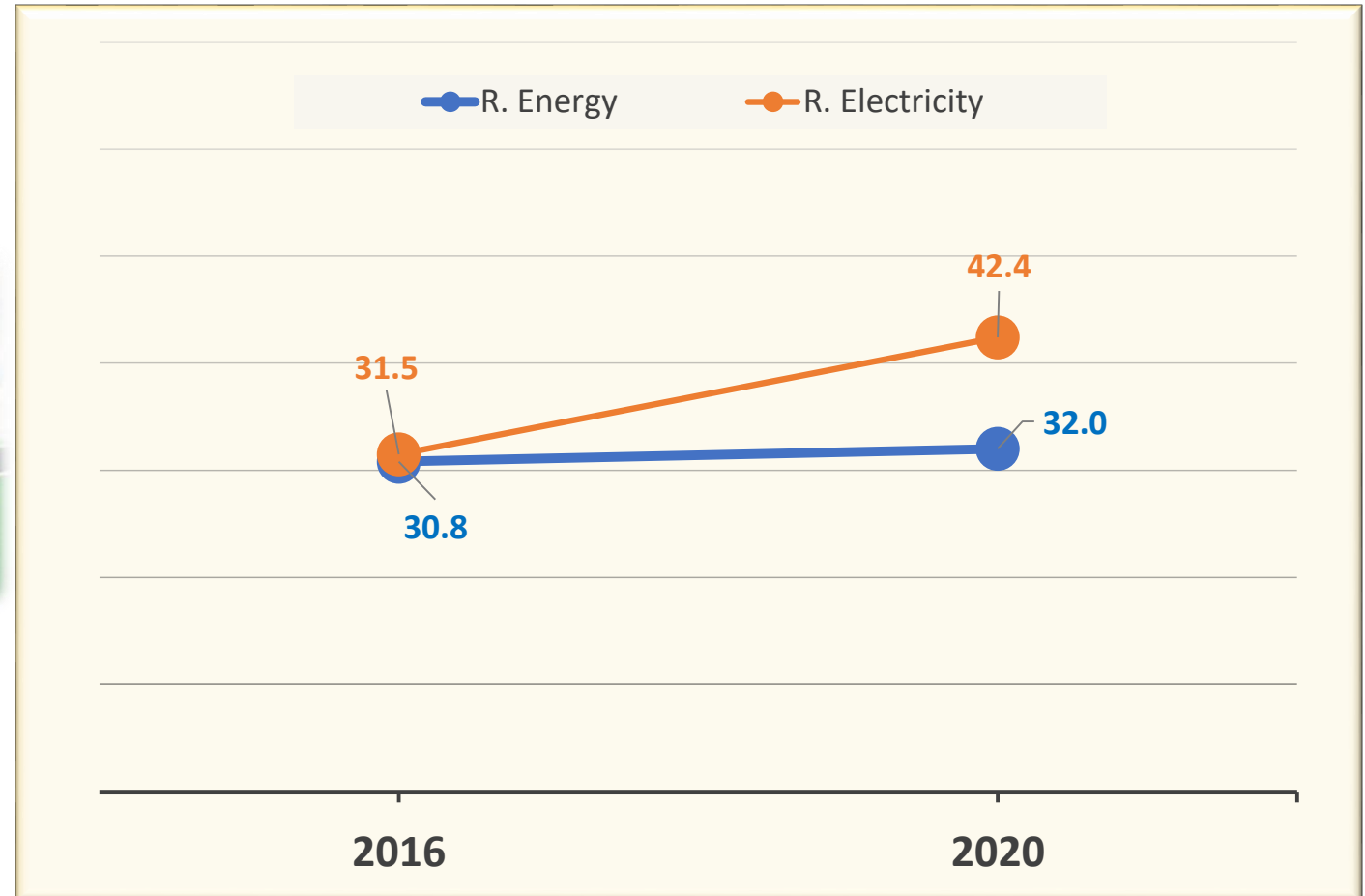
Source: EPC

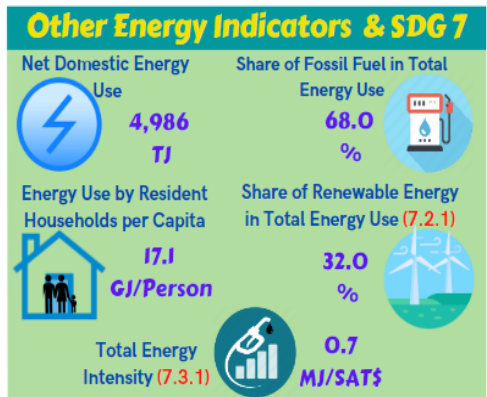
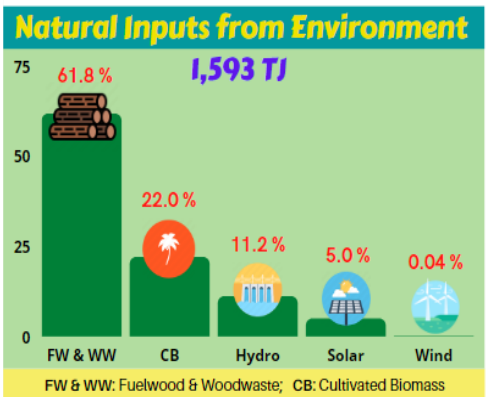
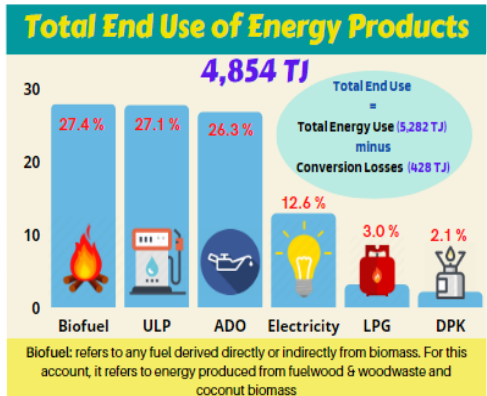
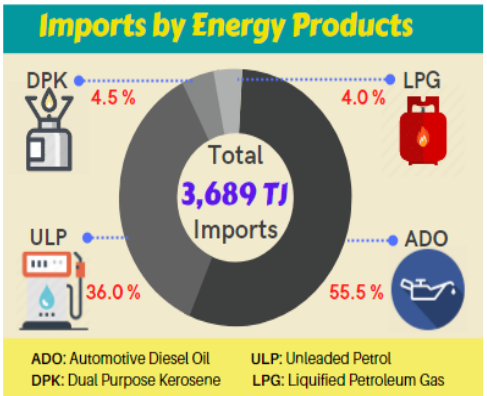
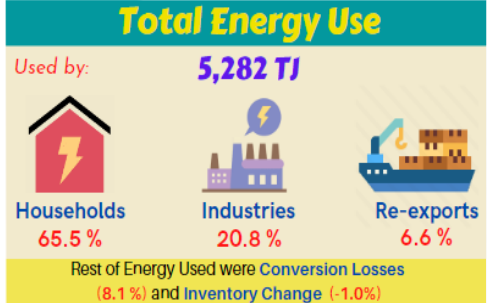
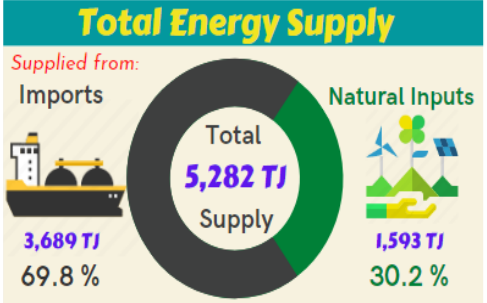
Note: Biomass Electricity started in April 2020

4. Policy Application?



Renewable Energy vs Renewable Electricity, Samoa 2016 & 2020 (%)





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