

Tuvalu Electric Vehicle Webinar Tuesday, August 30, 2022, 10:00am-12:00am (Tuvalu time)

# Feasibility Study for Low Emission Land Transport in Vanuatu

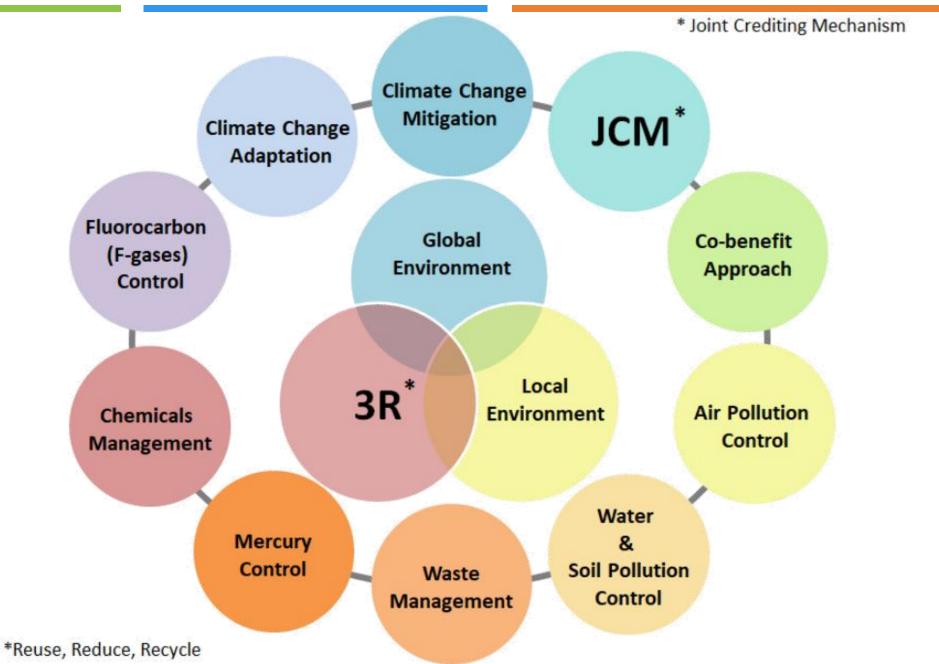
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#### What OECC is...





#### Introducing the CTCN



#### **Sources of Finance**

Voluntary donor countries

**GEF** 

Adaptation Fund

**GCF** 

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#### **Climate Technology Center (CTC)**

- UNEP, in collaboration with UNIDO manage the CTCN (host institution)
- 11 core research institutes (consortium partners) support its operation.



- Matchmaking
- Provide implementation costs (\$50,000-\$250,000 per project)

#### Network members (N)

Private companies, research institutions, NGO/NPO, public institutions, international organizations, etc

Request for technical assistance

- Feasibility study and demonstration
- Technology selection
- Policy review support
- Training, experience sharing, etc.

Implementation of technical assistance



#### **Global Registries (Network)**

2017: 341

2021: 649

Academic, research, funding, NGOs, private companies, and public institutions can register as network organizations.

Since 2014

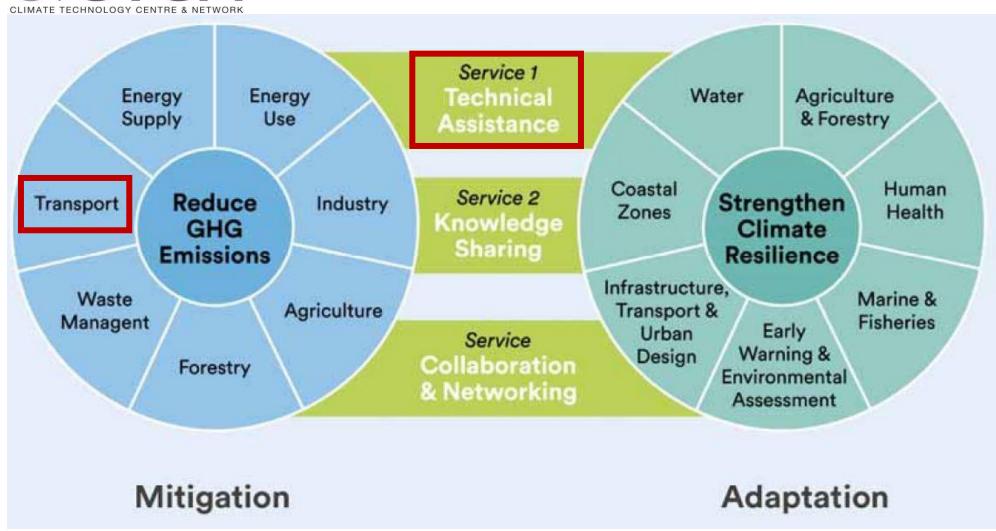
**Developing countries** 

OECC

#### What Project outline is...







#### How FS was conducted...



#### Feasibility study for low emission land transport sector in Vanuatu



This technical assistance advances the following Sustainable Development Goals:







#### Context

Vanuatu is a small island country in the Pacific which depends almost entirely on imported fossil fuel for its energy and transport needs. The continuous reliance on these fossil fuels is not only unsustainable for Vanuatu but goes against Vanuatu's national climate change mitigation ambition as reflected in its Nationally Determined Contributions, its Climate Change and Disaster Risk Reduction Policy, its National Energy Roadmap and Vanuatu's Sustainable Development Plan.

There is very little information available on the land transport sector. The public transportation system in Vanuatu is still inefficient due to no transport routing systems established. The public transportation system is owned by individuals with no control from the central or provincial governments. This makes the number of buses and taxes uncontrollable leading to more air pollution and increased emission of greenhouse gases.

Vanuatu lacks the policy and legislative framework to control the importation of inefficient vehicles into the country. The lack of education and awareness on the importation and use of low emission vehicles is a barrier to the rapid uptake of energy efficient vehicles into the country.

- Structured interviews to stakeholders and experts
- Conduction of 2 times stakeholder's consultation
- Multi-Criteria Decision Analysis (MDCA)
- Literature review
- Cost-benefit analysis

#### <Project details>

## Identified major barriers/issues (in relation to EV)



#### 19 barriers/issues from 5 major aspects related with EV.

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Policy/ legislative	No common direction, roadmap on EV introduction	No law/ regulation/ standard on EV and related facilities	No law/policy on types of cars imported into Vanuatu	No law/policy to import second hand vehicles	Lack of regulation to carry out quality check of vehicles	No law/ regulation/ standard on fuel efficiency and emissions of vehicles	No incentive to introduce EV such as tax benefits, subsidies	
Technical	Lack of information on technical advantages/ disadvantages of EV	EVs seem limitation on mileage, power, vehicle types	Lack of maintenance skills	Limited supply area of electricity	Stability of grid electricity	Poor road and environmental conditions for EV operation	Many narrow roads	
Institutional	No leading agency and coordinating entity on EV promotion	Financial	High initial cost of EV	High electricity tariff in Vanuatu	High cost for establishing charging network			
Others	Battery recycle Environmental impacts							

## Proposed 11pillars of measures corresponding to barriers



	Major barriers and issues	ı	Pillars of measures	Short-term 2022-2024	Time frame  medium-term Long-term 2025-2027 2028-2030
	No common direction, roadmap on EV introduction		1. EV roadmap		Phased approach
Policy/ legislative	No law/regulation/standard on EV and related facilities	1	1. EV Toddinap		
	No law/policy on types of cars imported into Vanuatu	<u>}</u> \	2. Coordination body to promote EV	_	
	No law/policy to import second hand vehicles	$\mathbb{W}$			
	Lack of regulation to carry out quality check of vehicles	}	3. Regulations on EV and other vehicles		
	No law/regulation/standard on fuel efficiency and emissions of vehicles	}/	4 Incentives to promote EV		
	No incentive to introduce EV such as tax benefits, subsidies	}/	4. Incentives to promote EV		
Institutional	No leading agency and coordinating entity on EV promotion	}	5. Awareness raising		
	Lack of information on technical advantages/ disadvantages of EV				
	Limitation on mileage and power as well as vehicle types	}	6. Pilot projects		
	Lack of maintenance skills	K			
Technical	Limited supply area of electricity		7. Training programs on EV maintenance		
	Stability of grid electricity	<u>}</u>	8. Develop public charging stations		
	Poor road and environmental conditions for EV operation	$\frac{1}{2}$	o. Bevelop public charging stations		
	Many narrow roads	<u> </u>	9. Improvement of electricity supply		
Financial	High initial cost of EV	}			
	High electricity tariff in Vanuatu	<b>]</b> /	10. Improvement of road infrastructure		
	High cost for establishing charging network	•	44 Ctualing and managed as		
Others	Battery recycle		11. Studies and researches		

## Promotion time flame of EV uptake toward 2030



	2022	2023	2024	2025	2026	2027	2028	2029	2030
EV/LEV mix	Current dies vehicles	sel/gasoline					LE	V EV	
Electric power mix	Diesel gen	erator				(Sola	, wind, geoth	Renewabl nermal, biofue	
EV introduction	Starting	_		•	sportation/so tend to the r		•	e/tourism pu s	rposes
Policy/strategy	Develo Roadn	•							
Regulation/incentive	Formulate		s on LEV/EV e and provic		s on LEV/EV				
Awareness raising	Educatio	onal prograi	m and works	·	ironmentally ansportation	-	insportation	, e.g. EV and	public
Pilot project			School EV bu	vernment fle	eet ansportation	in Port Vila			
Maintenance service		Ca	apacity enha maintena	ncement or nce/repair	n EV	License	private EV n comp	naintenance : anies	service
Charging station			<u>-</u>		infrastructu ions, home c			•	
Road infrastructure		Improven	nent of road	surface con	ditions in lin develop		vant roadma	ps on infrast	ructure

## Effective public transportation is required



### Image of electric bus



Source: Hino Motors, Ltd.



Source: BYD Company Ltd.

### Pathway to access GCF funding



# **CTCN**

Response project: (Up to USD 250,000)

Feasibility study

PROJECT READINESS

# **GCF**

#### Project implementation

Micro	Up to 10M
Small	Above 10M and up to 50M
Medium	Above 50M and up to 250M
Large	Above 250M



## Thank you for watching!

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