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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-seventh Meeting
Montreal, 28 June-2 July 2021¹

PROJECT PROPOSAL: PAPUA NEW GUINEA

This document consists of the comments and recommendation of the Secretariat on the following project proposal:

Phase-out

- HCFC phase-out management plan (fourth tranche) Germany

¹ Online meetings and an intersessional approval process will be held in June and July 2021 due to coronavirus disease (COVID-19)

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Papua New Guinea

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan	Germany (lead)	63 rd	100 per cent phase-out by 2025

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2020	1.07 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2020	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				0.0	0.0				0.0
HCFC-124				0.0	0.0				0.0
HCFC-141b				0.0	0.0				0.0
HCFC-142b				0.0	0.0				0.0
HCFC-22				0.0	1.07				1.07

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	3.3	Starting point for sustained aggregate reductions:	3.4
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	3.4	Remaining:	0

(V) BUSINESS PLAN		2021	2022	2023	2024	2025	Total
Germany	ODS phase-out (ODP tonnes)	0.36	0.0	0.0	0.0	0.34	0.7
	Funding (US \$)	149,812	0	0	0	139,750	289,562

(VI) PROJECT DATA			2011	2013	2014	2015	2016	2017-2019	2020	2021*	2022-2024	2025	Total
Montreal Protocol consumption limits			n/a	3.4	3.4	3.1	3.1	3.1	2.2	2.2	2.2	1.2	n/a
Maximum allowable consumption (ODP tonnes)			n/a	3.19	3.08	2.94	2.60	2.26	1.39	0.87	0.87	0.0	n/a
Agreed funding (US \$)	Germany	Project costs	350,000	340,000	0	0	301,000	0	134,000	0	0	125,000	1,250,000
		Support costs	41,300	40,120	0	0	35,518	0	15,812	0	0	14,750	147,500
Funds approved by ExCom (US \$)		Project costs	350,000	340,000	0	0	301,000	0	0.0	0	0	0	991,000
		Support costs	41,300	40,120	0	0	35,518	0	0.0	0	0	0	116,938
Total funds requested for approval at this meeting (US \$)		Project costs	0	0	0	0	0	0	0	134,000	0	0	134,000
		Support costs	0	0	0	0	0	0	0	15,812	0	0	15,812

*The fourth tranche was due for submission in 2020

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Papua New Guinea, the Government of Germany as the designated implementing agency, has submitted a request for funding for the fourth tranche of the HCFC phase-out management plan (HPMP) at the amount of US \$134,000, plus agency support costs of US \$15,812.² The submission includes a progress report on the implementation of the third tranche and the tranche implementation plan for 2021 to 2024.

Report on HCFC consumption

2. The Government of Papua New Guinea reported a consumption of 1.07 ODP tonnes of HCFC in 2020, which is 68 per cent below the HCFC baseline for compliance and 23 per cent below the target (1.39 ODP tonnes) in the Agreement with the Executive Committee. The 2016-2020 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Papua New Guinea (2016-2020 Article 7 data)

HCFC-22	2016	2017	2018	2019	2020	Baseline
Metric tonnes	39.00	38.00	34.00	23.24	19.45	60.00
ODP tonnes	2.15	2.09	1.87	1.28	1.07	3.30

3. HCFC-22 consumption in Papua New Guinea has been gradually decreasing since 2013 as a result of the HPMP activities implemented in the refrigeration and air-conditioning (RAC) servicing sector, and the enforcement of the licensing and quota system for imports of HCFC-22. The significant decrease in HCFC consumption from 2018 to 2019 was a result of the political disturbance that reduced the economic activities and imports of HCFC-22 in the country. It is estimated that HCFC-22 consumption accounts for approximately 20 per cent of total refrigerants use in the country.

CP implementation report

4. The Government of Papua New Guinea reported HCFC sector consumption data under the 2020 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Progress report on the implementation of the third tranche of the HPMP

Legal framework

5. The Government of Papua New Guinea has established a licensing and quota system for controlling the import and export of HCFCs. A ban on the import of HCFC-based equipment came into force in March 2020. The Government is amending the current Environment Regulations to enact several measures to support HCFC phase-out and HFC phase-down, including levies on the import of high-global-warming potential (GWP) refrigerants and RAC equipment based on high-GWP refrigerants, mandatory certification of technicians, and licensing for all refrigerants including HFCs. Levies on high-GWP refrigerants and equipment are expected to increase the cost of HCFC-22 and HFC refrigerants, and create a market shift towards low-GWP technologies. The revised regulations are expected to be approved by Cabinet by the end of 2021.

² As per the letter of 22 April 2021 from the Conservation and Environment Protection Authority of Papua New Guinea to the Secretariat.

6. The influx of domestic refrigeration equipment using R-600a prompted the Government to develop a legal framework for the safe use of flammable/toxic refrigerants. Safe handling of hydrocarbon refrigerants has been incorporated into the occupational safety guidelines. The NOU is working with other stakeholders to adopt ISO standards for the safe handling of refrigerants. The process is ongoing.

7. Activities related to institutional strengthening (IS), such as data collection and reporting, awareness raising, and coordination with various stakeholders in Papua New Guinea continue to be implemented.

Refrigeration servicing sector

8. The following activities were implemented:

- (a) Training of 189 customs officers and enforcement personnel (76 women) and 16 trainers (eight women) in the control of ODS imports and the prevention of illegal trade; the provision of five refrigerant identifiers; and the development of a memorandum of understanding with the Customs Service Authority for sharing information and enforcing the import licensing system;
- (b) Training of 26 trainers and 249 technicians (including 18 women) in good servicing practices and the safe handling of hydrocarbon refrigerants;
- (c) Development of training curriculum at vocational training institutes; finalization of RAC mechanic occupation skill standards; development of refrigeration mechanic training standards (level 1-3), and detailed training modules and assessment criteria, including the subject of handling flammable and toxic refrigerants;
- (d) Provision of training equipment and tools (e.g., 10 units of R-290 split air-conditioners (ACs), six units of R-600a domestic refrigerators, recovery units, vacuum pumps, five charging stations, and tools) to training institutes to facilitate training of technicians in the safe handling of flammable refrigerants; and
- (e) Conducting awareness-raising activities through various media on technology development and low-GWP alternatives, and disseminating information on the ban on the import of HCFC-based equipment.

Project implementation and monitoring

9. The National Ozone Unit (NOU), located within the Conservation Environment Protection Authority (CEPA), continues to be responsible for coordinating the implementation of activities of the HPMP as well as the IS programme. During the third tranche, a total of US \$21,744 was used for project management, monitoring and reporting (US \$20,000 for staff and consultants, and US \$1,744 for travel).

Level of fund disbursement

10. As of April 2021, of the US \$991,000 approved so far, US \$812,965 had been disbursed as shown in Table 2. The balance of US \$178,035 will be disbursed in 2021.

Table 2. Financial report of the HPMP for Papua New Guinea (US \$)

Funding tranche	Funds approved	Funds disbursed	Disbursement rate (%)
First	350,000	350,000	100
Second	340,000	340,000	100
Third	301,000	122,965	41
Total	991,000	812,965	82

Implementation plan for the fourth tranche of the HPMP

11. The following activities will be implemented between July 2021 and December 2024:
- (a) Following up on the amendment of the Environmental Regulations, including, *inter alia*, the development of differential tax policy, and preparation of the ban on HCFCs starting from 1 January 2025 (US \$43,035 from the third tranche);
 - (b) Training 70 customs officers in HCFC import control and the prevention of illegal trade of controlled substances; adopting new Harmonized System codes for HFCs (expected to be in place from 2022); developing an e-permit system for refrigerants and RAC equipment and linking it to the ASYCUDA³ system (US \$29,000, of which US \$19,000 is from the third tranche);
 - (c) Training 10 trainers and 100 technicians in good servicing practices, safe handling of hydrocarbon refrigerants and the installation, service and maintenance of R-290-based ACs; supporting the RAC Association; and implementing a mandatory technician certification programme (US \$52,000, of which US \$43,000 is from the third tranche);
 - (d) Provision of basic tool sets (e.g., gauges, vacuum pumps, cutters, tube benders, nitrogen cylinders and regulators) to seven vocational training institutes to support the training programmes (US \$20,000, of which US \$10,000 from the third tranche);
 - (e) Implementing an end-user incentive programme to promote R-290-based ACs including: establishing a policy measure to waive import duty for R-290-based ACs, providing incentives to end-users and training in handling R-290 refrigerants; conducting awareness-raising activities to disseminate information on the advantages of this low-GWP technology; and establishing the supply chain for R-290 split ACs by connecting importers to R-290 AC suppliers (US \$15,000);
 - (f) Demonstration of R-290 technology in cold rooms and small commercial refrigeration equipment including: evaluation of potential beneficiaries; supply of equipment, installation, trial, commissioning and training on a cost-sharing basis; awareness-raising and promotion of the completed demonstration project, supported by a differential import tax regulation in favour of low-GWP technologies and refrigerants (US \$40,000); and
 - (g) Project implementation, coordination, monitoring and reporting at a total US \$25,000 (of which US \$15,000 is from the third tranche) which will all be used for staff and consultants.
12. Under the IS programme, the NOU will continue implementing the licensing and quota system for the import of HCFCs and enforcing the ban on import of HCFC-based equipment; collecting HCFC consumption data to meet the reporting obligations; and coordinating with stakeholders to achieve the complete HCFC phase-out by 2025 (US \$88,000, of which US \$48,000 from the third tranche).

³ Automated System for Customs Data

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption

13. The Government of Papua New Guinea is pursuing accelerated phase-out of HCFCs in the HPMP. Although it is challenging to further reduce HCFC imports, the Government is committed to achieving the target in 2021 through enforcing the licensing and quota system and other activities planned in the fourth tranche of the HPMP.

Progress report on the implementation of the third tranche of the HPMP

Legal framework

14. The Government of Papua New Guinea has already issued HCFC import quotas for 2021 at 0.87 ODP tonnes, which is lower than the target of the Montreal Protocol and in accordance with the target set in the Agreement with the Executive Committee.

Refrigeration servicing sector

15. The fourth tranche was planned for submission in 2020, but was only submitted in 2021 due to the impact of COVID-19 pandemic. Noting the country's complete phase-out of HCFCs by 2025 without a servicing tail, the Secretariat enquired about how the servicing demand after 2025 will be met given that the ban on HCFC-based equipment only came into effect in March 2020. The Government of Germany explained that the relevant industry and owners of HCFC-based equipment were informed well in advance and are aware of the HCFC phase-out schedule, and they have prepared for the transition. The NOU and the industrial association noted that most HCFC-based RAC equipment are gradually coming to the end of their life. The recovery programme will cover the demand for a servicing tail after 2025 if there is any. Activities to support recovery and reuse will be planned based on actual needs when the phase-out is approaching the end. The Government has planned a ban on the import of HCFCs starting 1 January 2025 and is confident that it will achieve the complete HCFC phase-out target by 1 January 2025.

16. The Secretariat noted that the plan for the fourth tranche includes an end-user incentive programme for R-290-based split ACs and a demonstration of R-290 closed plug-and-play systems in cold rooms, and examined the applicable conditions required by decision 84/84(b). It is noted that Papua New Guinea has made commitments to achieve carbon neutrality by 2050, is pursuing accelerated phase-out of HCFCs by 2025, and is endeavoring to adopt low-GWP technologies during HCFC phase-out. The incentive and demonstration activities were planned for the third tranche but were not implemented as the Government used the funding focusing on training technicians in the safe handling of flammable refrigerants, establishing a ban on HCFC-based equipment and preparing safety guidelines for using R-290 refrigerant to ensure that an enabling environment for the incentive programme and the demonstration activities were present for sustainable adoption of the technology. The country only consumes HCFC-22 in the RAC servicing sector, mainly in split ACs in the tourism sector (hotels) and public institutions, and in commercial refrigeration equipment in fisheries and supermarkets. Incentive and demonstration activities are expected to escalate the uptake of R-290 technology. A ban on the import of HCFC-based equipment has been established and is being effectively enforced. The price of refrigerant is US \$11.00/kg for R-290 and US \$24.05/kg for HCFC-22. The Government of Germany clarified that the introduction of R-290 technology will be through the import of new R-290-based equipment, not through retrofitting.

17. The Government of Germany further provided detailed information on the incentive programme as well as the policy support and communication plans to scale up the adoption of the technology, including a differential tax system based on the GWP value of refrigerants; the Government's procurement policy in

favour of low-GWP technologies; and the training and certification of technicians to ensure safety and sustainability in the adoption of the alternatives. An estimated incentive of US \$100 per unit will be provided to end-users for 100 ACs to encourage imports and support the establishment of a supply chain for R-290-based split ACs, which is crucial for long-term sustainability. The training and awareness activities will be conducted in conjunction with the incentive programme to escalate the uptake.

18. The demonstration of the R-290-based closed plug-and-play system in cold rooms will be introduced from Europe. The closed system makes the safety risk minimal and easy to adopt. A willing recipient will be identified based on the commitment to replicate this technology in their business. The demonstration will include the provision of key equipment; installation, trial and commissioning; and training and information dissemination. The demonstration aims to encourage the industry to have practical experiences with this low-GWP technology and to facilitate training and skills transfer in the installation, operation and maintenance of such equipment. The demonstration will also create a local supply chain to ensure that the technology will be available locally post-demonstration to allow for easier adoption of the technology and to encourage the replacement of existing systems with a low-GWP option. A detailed report will be provided upon completion in line with decision 84/84(d).

Gender policy implementation⁴

19. Gender mainstreaming will be considered at all steps of implementation of the HPMP, including policy development, design of intervention, training, awareness-raising and other activities. During the third tranche, 76 female customs officers/enforcement personnel and eight female customs trainers, as well as 18 female trainers/technicians in the refrigeration servicing sector were trained. The Government planned to encourage more female participation in training of customs officers and technicians in the fourth tranche.

Sustainability of the HCFC phase-out

20. The Government has been monitoring the import of ODS that have been phased out and there have been no illegal imports of phased-out ODS. The NOU has collaborated with the Customs Department to integrate the ozone issue into customs training by upgrading training manuals and training the trainers for regional customs offices. The certification of technicians has been implemented to ensure long-term sustainability of technician training and the safe adoption of low-GWP alternative technologies. A ban on imports of HCFC-based equipment has been established since March 2020 and is being effectively enforced, and a ban on the import of HCFCs has been planned for 2025.

Conclusion

21. The Government of Papua New Guinea has established an operational licensing and quota system, and the consumption in 2020 is below the targets in the Montreal Protocol and in the Agreement with the Executive Committee. Training continued to be provided to customs officers, and to RAC technicians in good servicing practices and the safe handling of flammable refrigerants with equipment and tools provided to vocational institutes to ensure sustainability of training. The disbursement of the third tranche has reached 41 per cent. The progress achieved so far, the regulatory framework established by the Government, and the activities proposed under the fourth tranche including an end-user incentive programme in split ACs and a demonstration project in the commercial refrigeration sector for the introduction of R-290 technology, will further facilitate the country in achieving its accelerated HCFC phase-out targets.

⁴ Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.

RECOMMENDATION

22. The Fund Secretariat recommends that the Executive Committee:

- (a) Takes note of the progress report on the implementation of the third tranche of the HCFC phase-out management plan (HPMP) for Papua New Guinea; and
- (b) Provides blanket approval of the fourth tranche of the HPMP for Papua New Guinea, and the corresponding 2021-2024 tranche implementation plan, at the funding level shown in the table below:

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (fourth tranche)	134,000	15,812	Germany