United Nations Development Programme Zimbabwe

Project Title: Conversion from HFC-134a to Isobutane in the manufacture of domestic refrigerators at Capri

Type of Report - Annual Progress Report

Reporting Period:	1 January 2022 – December 31, 2022,

Development Partners:	Donor(s): **Multilateral fund incl. Government of France contribution** Implementing Partner(s): Ministry of Environment,, Climate, Tourism and Hospitality Industry, Climate Change Management Department, National Ozone Unit
Project Numbers & Title:	**UNDP Reference** ZWE10 000xxxxx **Donor Reference** Xxxxxxxxxxxxx Conversion from HFC-134a to Isobutane in the manufacture of domestic refrigerators at Capri

Project Objective/impact	To eliminate the use of the Greenhouse Gas HFC-134a in the domestic manufacturing of refrigerators and freezers in Zimbabwe by the adoption of Isobutane (HC-600a) as refrigerant.
UNDP CPD outcome	Outcome 3: Vulnerable Communities are equipped to cope with climate change and build resilience for household and food and nutrition security
UNDP Strategic Plan RRF outcome	Outcome 3: Vulnerable Communities are equipped to cope with climate change and build resilience for household and food and nutrition security
UNDP Strategic Plan RRF output	Output 3.2 - Mechanisms are in place to assess and mitigate natural and man-made risks at the subnational and national level

Project Budget (US$)	Total Project expenses (US$)	Annual Budget (US$)	Delivery Rate (% of total budget)
626,954.00	402,654.92	412,688	97.32%

Financial Status as of Day Month Year			
Total Contributions:			
	Commitments	Deposits	USD Equivalent
Trac 1& 2	**200,000.00**	**200,000.00**	**200,000.00**
Donor 1 – French	**100,000.00**	**100,000.00**	**100,000.00**
Donor 2 – MP	**112,688.00**	**112,688.00**	**112,688.00**
		Total funds received:	**$412,688.00**
Total Expenditures:			
			()
		Expenditure 1.Jan.12 - 31.Dec.12	(401,652.07)
		Total expenditures:	**$(402,654.92)**
		Closing or Provisional Balance:	**$11,035.93**

General points on drafting a report in the UNDP ZWE donor reporting template:

- Refer to UNDP's Style Manual (November 2008) for guidelines on spelling, grammar, punctuation, names, capitalization, acronyms, and numbers etc.;
- Use Thesaurus when necessary (Review tab);
- Always use Spelling & Grammar check (Review tab) before submitting any draft report to HoU;
- You may use bullet points in the achievements, challenges and lessons learned sections, but must ensure that in-depth narrative analysis is provided to flesh out any bullet point listed in that section.

1. Executive Summary (450 words)

- **Context and key developments of the project / programme**
  The use of R-600a in domestic refrigeration is slowly gaining momentum in Zimbabwe as most imported domestic fridges now are charged with R-600a and thus, the country is promoting the use of Hydrocarbon. The main challenges relating to the use of R-600a in Zimbabwe will be the flammability and availability of good quality refrigerant grade material. Technicians are being trained and certified on knowledge and skills including the safe use and handling of flammable refrigerants. Capri as one of the largest current consumers of R134a in the manufacturing of domestic refrigerators and chest freezers, will venture into R-600a consumption. To date, a purchase order was issued out to the selected vendor and thus the equipment is expected in country in the first quarter 2023. Procurement delays in selecting a vendor were a major challenge faced during the period under review. Also getting specifications right had a long leg time in the delivery of the equipment.

- **Budget –**
  The total project budget was USD 626,954.00, whereas the total expenditures amounted to $402,654.92 which was 97.32% of the annual project budget of $412,688.

2. Background

The use of R-600a in domestic refrigeration is slowly gaining momentum in Zimbabwe, most imported domestic fridges now are charged with R-600a. The country is promoting the use of Hydrocarbon. The main challenges relating to the use of R-600a in Zimbabwe will be the flammability and availability of good quality refrigerant grade material. Technicians will be trained and certified on knowledge and skills including the safe use and handling of flammable refrigerants, as part of the ongoing HPMP activities. The country has intensified training and awareness programmes and wholesalers and distributors are being trained on storage and handling as well as making sure that the refrigerant is sold to trained technicians only. The technician certification programme being implemented under the HPMP is due to be approved and rolled out imminently. Capri is one of the largest current consumers of R134a in the manufacturing of domestic refrigerators and chest freezers.

The advantages of using R-600a are reduced charge volume with the potential to makes it very economical subject to suitable supply chain and the potential for improved energy efficiency subject to the appropriate design considerations. With appropriate refrigerator designs, it should be possible to achieve 10-15% energy efficiency improvements; however, that aspect is outside the scope of this project.

Ammonia (absorption) domestic refrigeration is also used in Zimbabwe, generally in remote areas that are not connected to the National Electricity grid. Suppliers of R-717 fridges have recently established distribution channels from imports to the end users in rural areas. This has seen an upsurge of absorption domestic fridges. However, there is need for extensive training as very few technicians are familiar with the technology though it is ozone and climate friendly.

The total HFC refrigerant consumption in Zimbabwe in 2017 is estimated to be 190 MT of this, it is estimated that 90% or around 171 MT was consumed, as refrigerant.

Until recently manufacturing of domestic refrigerators and freezers in Zimbabwe was dominated by two companies, Imperial, and Capri. At the time of preparation of this project, it is understood that the production of domestic refrigerators and Freezers at Imperial is negligible, and Capri is effectively the sole producer. The total national production in 2017 was 97,000 units.

3. Objectives

The objective of the project is to eliminate the use of HFC-134a in the manufacture of Domestic refrigerators and freezers at Capri, Zimbabwe, by the adoption of Isobutane (HC-600a) as refrigerant. HC-600a is non-ODS, low-GWP alternative to HFC-134a and provides a long-term solution for the manufacturing company. This project sets to contribute to reducing the environmental impact of Capri's product on global warming both in terms of the manufacturing process and the operating life of the appliances.

* *Outcome 3: Vulnerable Communities are equipped to cope with climate change and build resilience for household and food and nutrition security*

* *Output 3.2 - Mechanisms are in place to assess and mitigate natural and man-made risks at the subnational and national level*

4. Achievements

A contractor has been selected and has been given a purchase order to deliver the equipment. The equipment will be delivered in country during the first term of 2023.

.

Progress towards Development Results[1]

Section 1: Overall progress against the CPD outcome

Populate the table below and add narrative to compliment the tables based on the guidance provided below

CPD Outcome 2: Citizen expectations for voice, development, the rule of law and accountability are met by stronger systems of democratic governance		
Summary achievements based on CPD Outcome <add outcome number(s)> targets for 2016		
CPD outcome target 2016	**Summary achievement to date**	**Status** *On-track, Off-track, Achieved, Partially Achieved, Not Achieved*
Percentage of population with access to justice and human rights services	Black font, un-bolded	Blue font, un-bolded
xxxx	Black font, un-bolded	Blue font, un-bolded
5% reduction in major crimes reported	Black font, un-bolded	Blue font, un-bolded
Overall		**Blue font, bolded**

Provide the **annual progress** (cumulative) made by the project in relation to planned outcome/s the CPD linked to UNDAF (use information from project and CPD **indicators** and **show evidence** through data and concrete analysis from **M&E processes within UNDP** and other sectoral processes). Mention changes in development conditions, people's lives, in communities in terms of e.g. better access to services or empowerment to claim their rights or hold government accountable, rule of law, good governance, etc. drawing from evidence found in studies done by the Project or other entities, government's key documents such as the Approach Paper or National Plans, MDG reports, Human Development Reports, National surveys/census, sectoral database/plans, budget speech, and policy changes in the thematic area of your project. *Also refer to additional guidance notes above.*

Section 2: Progress against CPD Outputs and Project Outputs

Guidance: After populating the tables, the narrative provided should complement the tables.

CPD Output 3.2 - Mechanisms are in place to assess and mitigate natural and man-made risks at the subnational and national level		
Summary achievement based on CPD output targets for 2016		
CPD output target 2016	**Summary achievement to date** *(provide gender disaggregation, and number of beneficiaries/population reached where applicable)*	**Status** *On-track, Off-track, Achieved, Partially Achieved, Not Achieved*
1 Contractor selected and given purchase order to deliver equipment.		On-track

Description of Results

The equipment purchasing has been initiated. Having the equipment in place will help in assessing and mitigating natural and man-made risks at the subnational and national levelthe reduction of the Ozone Depleting Substances.

Description of activities:

Through facilitating the procurement process, UNDP selected a contractor, and the contractor was given a purchase order to deliver the equipment. The equipment is expected to be delivered in country during the first term of 2023.

5. Cross-cutting Issues

6. Monitoring and Evaluation

A Specific Story (maximum half a page)

7. Challenges and Lessons Learned

Challenges: Procurement delays in selecting a vendor were a major challenge faced during the period under review. Also getting specifications right had a long leg time in the delivery of the equipment.

Lessons learned: There is a need for a technical person to develop the right specifications

required to avoid long leg time in the delivery of the equipment.

8. Key Partnerships and Inter-Agency Collaboration

The project is being implemented through UNDP in partnership with the Ministry of Environment, Climate, Tourism and Hospitality Industry. Thus, UNDP provides quality assurance to make sure that the project objectives are met. The National Ozone Unit in the Climate Change Management Department oversees the day-to-day project related activities. The Unit also periodically reports to the project board. Project implementation followed through the laid-out procedure.

9. Project Board Meeting Outcomes and Programmatic Revisions

Four (4) NOU Steering Committee meetings were held in 2022. The key discussions were around the project progress report. Project updates were shared with the committee, and it was emphasized that the project needed to be fast tracked when the equipment is delivered since it delayed taking off.

Prepared By

George Chaumba

DocuSigned by:

EA250A61065A475...

27-Apr-2023

Project Manager Date

Approved By

Jeremiah Mushosho

DocuSigned by:

36B6D9B8A54G4GB...

28-Apr-2023

UNDP Head of Unit Date

UNDP Resident Representative Date

Implementing Partner Date