



联合国
环境规划署

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执行蒙特利尔议定书
多边基金执行委员会
第九十六次会议
2025 年 5 月 26 日至 30 日，蒙特利尔
临时议程¹项目 9(c)和(d)

联合国环境规划署 2025 年工作方案

¹ UNEP/OzL.Pro/ExCom/96/1

执行蒙特利尔议定书多边基金执行委员会的会前文件不妨碍文件印发后执行委员会可能作出的任何决定。

基金秘书处的评论和建议

1. 环境规划署请执行委员会为表 1 所列 2025 年工作方案核准 3,139,306 美元，外加机构支助费用 272,852 美元。呈件附于本文件之后。

表 1: 环境规划署 2025 年工作方案

国家	活动/项目	申请金额 (美元)	建议金额 (美元)
A: 建议一揽子核准的活动			
A1: 体制强化项目的延长			
安哥拉	体制强化项目的延长（第八阶段）	356,106	356,106
萨尔瓦多	体制强化项目的延长（第七阶段）	180,000	180,000
埃塞俄比亚	体制强化项目的延长（第十阶段）	180,000	180,000
纳米比亚	体制强化项目的延长（第十二阶段）	180,000	180,000
A1 共计		896,106	896,106
A2: 扶持活动的技术援助（第 79/46 号决定）			
中非共和国	氢氟碳化物逐步减少的扶持活动	150,000	150,000
A2 小计		150,000	150,000
机构支助费用		10,500	10,500
共计		160,500	160,500
A3: 氟氯烃淘汰管理计划项目编制			
伊拉克	氟氯烃淘汰管理计划编制（第三阶段）	60,000	60,000
科威特	氟氯烃淘汰管理计划编制（第三阶段）	70,000	70,000
A3 小计		130,000	130,000
机构支助费用		16,900	16,900
A3 共计		146,900	146,900
A4: 编制国家已使用或无用受控物质的库存清单，以及此类物质的收集、运输和处置计划²			
巴巴多斯	编制已使用或无用受控物质的国家库存清单和计划	80,000	80,000
多米尼加	编制已使用或无用受控物质的国家库存清单和计划	70,000	70,000
埃塞俄比亚	编制已使用或无用受控物质的国家库存清单和计划	80,000	80,000
格鲁吉亚	编制已使用或无用受控物质的国家库存清单和计划	80,000	80,000
加纳	编制已使用或无用受控物质的国家库存清单和计划	90,000	90,000
伊拉克	编制已使用或无用受控物质的国家库存清单和计划	100,000	100,000
阿曼	编制已使用或无用受控物质的国家库存清单和计划	90,000	90,000
卢旺达	编制已使用或无用受控物质的国家库存清单和计划	80,000	80,000
圣基茨和尼维斯	编制已使用或无用受控物质的国家库存清单和计划	70,000	70,000
苏里南	编制已使用或无用受控物质的国家库存清单和计划	80,000	80,000
坦桑尼亚联合共和国	编制已使用或无用受控物质的国家库存清单和计划	80,000	80,000
A4 小计		900,000	900,000
机构支助费用		117,000	117,000
A4 共计		1,017,000	1,017,000
A5: 编制氟氯烃消费量核查报告的技术援助			
安提瓜和巴布达	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000

² 此处称为编制已使用或无用受控物质的国家库存清单和计划

国家	活动/项目	申请金额 (美元)	建议金额 (美元)
伯利兹	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
不丹	氟氯烃淘汰管理计划核查报告	30,000	30,000
布隆迪	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
刚果	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
圣卢西亚	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
苏里南	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
津巴布韦	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
A5 小计		240,000	240,000
机构支助费用		31,200	31,200
A5 共计		271,200	271,200
B: 建议单独审议的活动			
B1: 体制强化的额外紧急情况			
马尔代夫	体制强化的额外紧急援助	30,000	*
B1 共计		30,000	*
B2: 全球技术援助			
全球	国家臭氧官员和国家能效政策制定者结对，以支持《基加利修正案》的目标（第二阶段）	793,200	*
B2 小计		793,200	*
机构支助费用		97,252	*
B2 共计		890,452	*
A1, A2, A3, A4, A5, B1, B2 共计		3,139,306	2,316,106
A1, A2, A3, A4, A5, B1, B2 机构支助费用		272,852	175,600
合计		3,412,158	2,491,706

* 建议单独审议

A: 建议一揽子核准的活动

A1: 体制强化项目的延长

项目说明

2. 环境规划署为表 1 第 A1 部分所列国家提交了延长体制强化项目的申请。这些项目的说明载于本文件附件一。

秘书处的评论

3. 秘书处根据有关资格和供资数额的准则³和相关决定审查了四个体制强化项目的延长申请。秘书处对照前一阶段的原始工作计划、国家方案和第 7 条数据、关于其氟氯烃淘汰管理计划执行情况的最新报告、机构进度报告以及缔约方会议的任何相关决定，对这些申请进行了交叉核对。注意到所有四个国家都提交了其 2023 年国家方案和第 7 条数据，遵守了《蒙特利尔议定书》规定的控制目标，并且报告的氟氯烃年度消费量没有超过其与执行委员会签订的氟氯烃淘汰管理计划协定中规定的年度最高允许消费量。此外，根据

³ 第 91/63 号决定：(b)核准最终报告和延长体制强化供资申请以及相应绩效指标的修订格式；以及(c)请第 5 条国家通过双边和执行机构，自执行委员会 2023 年第一次会议起，在所有延长体制强化的申请中使用上文(b)分段提及的修订格式。

第 91/63(b)号决定，提交的所有申请都包括对绩效指标、项目风险和可持续性以及体制强化目标实现情况的评估。

秘书处的建议

4. 秘书处建议按照本文件表 1 第 A1 部分所示供资数额一揽子核准安哥拉、萨尔瓦多、埃塞俄比亚和纳米比亚的体制强化延长申请。谨建议执行委员会向上述国家政府转达本文件附件二所载评论。

A2: 扶持活动的技术援助（第 79/46 号决定）

背景情况

5. 根据第 79/46 号决定⁴，环境规划署提交了一份供资申请，用于在一个国家⁵开展氢氟碳化物逐步减少的扶持活动，如表 1 第 A2 部分所示。

6. 扶持活动包括修订关于消耗臭氧层物质和使用消耗臭氧层物质设备的现行国家立法和条例，以便为《基加利修正案》的实施采取氢氟碳化物进出口许可证控制措施；协助海关为不同的氢氟碳化物制定国家海关编码，并将其纳入海关关税，以确保适当监测和记录单个氢氟碳化物的进出口或再出口；以及协助海关为氢氟碳化物制定针对具体国家的国家统一系统编码，以促进适当监测和记录单个氢氟碳化物/替代品的进出口。

秘书处的评论

7. 秘书处审查了扶持活动申请，并得出结论认为该申请符合第 79/46 号决定的要求，如下所述：

- (a) 环境规划署提交了中非共和国政府的核可信函；
- (b) 项目提案包括对扶持活动、体制安排、费用细目和执行时间表的说明；以及
- (c) 项目执行期为 18 个月。

8. 为中非共和国申请的供资符合第 79/46(c)号决定，并根据该国的氟氯烃基准计算。

9. 秘书处注意到，由于 2013 年至 2020 年期间该国的安全和行政不稳定，中非共和国在执行《蒙特利尔议定书》活动方面出现拖延，包括提交国家方案和第 7 条数据⁶、执行其体制强化项目和氟氯烃淘汰管理计划。为 2013-2014 年期间核准的体制强化项目（第六阶段）已于 2022 年完成。体制强化项目第七阶段在第 95 次会议上提出申请并获得核准，

⁴ 执行委员会决定，除其他外，在允许各国灵活开展一系列活动以根据《基加利修正案》履行其初始义务的基础上核准扶持活动；扶持活动可包括但不限于以下活动：促进和支持早日批准《基加利修正案》；启动支助性体制安排；审查许可证制度；报告氢氟碳化物数据；以及展示非投资活动。

⁵ 中非共和国尚未核准《基加利修正案》。

⁶ 2013 年至 2023 年的国家方案和第 7 条数据均已在第 95 次会议之前提交。

秘书处注意到⁷，尽管面临挑战，国家臭氧机构仍在体制强化项目第六阶段下执行了《蒙特利尔议定书》的若干活动。尽管中非共和国的氟氯烃淘汰管理计划在第 82 次会议上被取消⁸，环境规划署和工发组织将资金退还给了多边基金秘书处⁹，但该国目前正在为国家臭氧局的运作做准备，并计划将编制氟氯烃淘汰管理计划第二阶段的申请提交执行委员会第 97 次会议审议。

10. 秘书处从呈件中注意到，该国目前正在谈判以启动批准进程，目的是在扶持活动项目的支助下，在政治条件和国家稳定允许的情况下，于 2025 年 12 月之前完成批准进程。环境规划署询问后表示，国家正在努力为执行《蒙特利尔议定书》建立国家臭氧指导委员会。环境规划署计划今年向该国派出一个特派团，以加强各项活动，并将继续监测体制强化和扶持活动项目的进展情况，以确保该国执行项目的能力和问责制。

秘书处的建议

11. 秘书处建议按照上文表 1 第 A2 部分所示供资数额一揽子核准中非共和国氢氟碳化物逐步减少的扶持活动申请。

A3: 氟氯烃淘汰管理计划项目编制

项目说明

12. 如表 1 第 A3 部分所示，环境规划署作为指定执行机构提交了两个国家氟氯烃淘汰管理计划新阶段的编制申请。

13. 环境规划署提供了支持伊拉克和科威特氟氯烃淘汰管理计划第三阶段项目编制申请的活动说明，其中包括：申请项目编制供资的理由；各自氟氯烃淘汰管理计划前几阶段执行情况的进度报告；项目编制期间将开展的活动清单以及使用氟氯烃淘汰管理计划项目编制申请格式编制的相应预算。

秘书处的评论

14. 在审查申请时，秘书处考虑了第 71/42 号决定所载第 5 条国家氟氯烃淘汰管理计划编制供资准则，氟氯烃淘汰管理计划前几阶段进度，包括本文件编制时的付款执行情况；以及第 84/46(e)号决定¹⁰。秘书处注意到申请的供资符合第 71/42 号决定，并且这两项申请符合第 82/45 号决定，允许在氟氯烃淘汰管理计划前一阶段结束日期前两年提交下一阶段项目编制的申请。

⁷ UNEP/OzL.Pro/ExCom/95/36 号文件附件一

⁸ UNEP/OzL.Pro/ExCom/82/17 号文件附件一

⁹ 工发组织在第 84 次会议上退还了 105,999 美元，外加机构支助费用 7,950 美元，环境规划署在第 93 次会议上退还了 30,000 美元，外加机构支助费用 3,900 美元。

¹⁰ 只有那些氟氯烃淘汰管理计划第二阶段已获核准且削减目标低于 2025 年履约目标的国家，才允许将氟氯烃淘汰管理计划第三阶段纳入业务计划。

15. 秘书处还注意到，这些国家提交了其 2023 年第 7 条和国家方案数据，这些国家遵守了《蒙特利尔议定书》规定的控制目标，其报告的氟氯烃年度消费量不超过其与执行委员会签订的氟氯烃淘汰管理计划协定中规定的年度最高允许消费量。

16. 环境规划署确认，伊拉克和科威特的氟氯烃淘汰管理计划第三阶段将在 2030 年 1 月 1 日之前淘汰这些国家氟氯烃基准的 100%。

秘书处的建议

17. 秘书处建议按照表 1 第 A3 部分所示供资数额一揽子核准伊拉克和科威特氟氯烃淘汰管理计划第三阶段的项目编制。

A4: 编制国家已使用或无用受控物质的库存清单以及此类物质的收集、运输和处置计划

项目说明

18. 如表 1 第 A4 部分所示，环境规划署作为指定执行机构，为 11 个国家提交了编制已使用或无用受控物质国家库存清单和计划的申请。

19. 环境规划署使用相关的项目提案提交表格，为巴巴多斯、多米尼克、埃塞俄比亚、格鲁吉亚、加纳、伊拉克、阿曼、卢旺达、圣基茨和尼维斯、苏里南和坦桑尼亚联合共和国提供了编制已使用或无用受控物质国家库存清单和计划所需活动的说明，以及每项活动的相应费用。

秘书处的评论

20. 在审查这些申请时，秘书处考虑了第 91/66 号决定所载编制已使用或无用受控物质国家库存清单和计划的标准，以及拟议的项目编制活动及其与各国国家淘汰/逐步减少计划（即氟氯烃淘汰管理计划或基加利氢氟碳化物执行计划）的联系。秘书处指出，每项供资申请都符合第 91/66 号决定。

21. 这 11 个国家资金申请中的活动包括：审查现有数据；编制国家清单、行动计划和最终报告；利益攸关方磋商和确认；对现有法规和政策进行审查和分析，包括废物管理政策；前往设施进行现场访问，以收集和核查数据；对消耗臭氧层物质、氢氟碳化物、设备与容器、国家利益攸关方、政策和法规进行案头研究；预测未来可能需要回收、再生、再循环或处置的已使用或无用消耗臭氧层物质和氢氟碳化物数量，并审查回收和再循环中心及其他参与废物管理的中心；评估现有处置选项（再循环、再生、销毁）的可行性和成本，并评估再生中心和销毁设施的经济可行性，制定业务或融资模式，以确保收集或处置活动的长期可持续性；以及性别主流化活动。除这些活动以外，有 7 个国家还纳入了项目监测和实施活动；有 6 个国家包括了识别能够分析已使用或无用消耗臭氧层物质和氢氟碳化物成分的实验室及其能力；另有 1 个国家则包括为所有拥有消耗臭氧层物质和氢氟碳化物现有储备的实体建立注册系统，并制定可能在未来积累这类储备的企业的一般概况。

秘书处的建议

22. 秘书处建议按照表 1 第 A4 部分所示供资数额一揽子核准巴巴多斯、多米尼克、埃塞俄比亚、格鲁吉亚、加纳、伊拉克、阿曼、卢旺达、圣基茨和尼维斯、苏里南和坦桑尼亚联合共和国已使用或无用受控物质国家库存清单和计划的编制。

A5: 编制氟氯烃消费量核查报告的技术援助

项目说明

23. 根据第 61/46(c)号决定¹¹，秘书处抽样调查了 12 个低消费量第 5 条国家，目的是核查其氟氯烃淘汰管理计划协定的遵守情况。所选国家列于 UNEP/OzL.Pro/ExCom/96/16 号文件关于项目审查期间查明问题概览的表 5 中。环境规划署作为牵头执行机构，正在为核查不丹的氟氯烃淘汰管理计划和安提瓜和巴布达、伯利兹、布隆迪、刚果、圣卢西亚、苏里南、津巴布韦的氟氯烃淘汰管理计划第二阶段申请资金。

秘书处的评论

24. 秘书处注意到供资申请与前几次会议为类似核查核准的资金相一致，秘书处还注意到核查报告必须在为氟氯烃淘汰管理计划申请下一次付款所适用的执行委员会会议之前至少 10 周提交。

秘书处的建议

25. 秘书处建议按照表 1 第 A5 部分所示供资数额一揽子核准不丹氟氯烃淘汰管理计划以及安提瓜和巴布达、伯利兹、布隆迪、刚果、圣卢西亚、苏里南和津巴布韦氟氯烃淘汰管理计划第二阶段核查报告编制工作的技术援助，但有一项谅解，即核查报告必须在为氟氯烃淘汰管理计划申请下一次付款所适用的执行委员会会议之前至少 10 周提交。

B: 建议单独审议的活动

B1: 体制强化的额外紧急援助

项目说明

¹¹ 要求秘书处在每年第一次会议上提供一份代表氟氯烃消费基准不超过 360 公吨且氟氯烃淘汰管理计划已获核准的 20% 的国家名单，以核准对这些国家的供资，用于核查该国遵守该年氟氯烃淘汰管理计划协定的情况。

26. 环境规划署为表 1 第 B1 部分所列国家提交了体制强化额外紧急援助的申请。2024 年 12 月 12 日，马尔代夫因一起毁灭性火灾事件而面临意外挫折。大火吞噬了三个重要的政府部门，包括旅游和环境部。不幸的是，隶属于该部的国家臭氧机构在大火中失去了所有计算机、设备、固定装置、重要文件和其他材料。这一事件对国家臭氧机构的运行能力造成了重大打击，破坏了其有效履行职能的能力。修建新办公楼的规划工作正在进行之中。目前，国家臭氧机构与其他受影响的政府办事处一起，在首都一处临时设施内运作。虽然政府保证将为国家臭氧机构分配一个永久性办公场所，但提供所需支持仍然是当务之急。

秘书处的评论

27. 秘书处承认马尔代夫政府在执行《蒙特利尔议定书》方面做出的承诺。秘书处注意到，火灾事件发生时，体制强化项目的现阶段正在进行中。秘书处还注意到，申请的额外资金将部分用于更换信息技术设备、基本家具和消耗品，使国家臭氧机构能够以全面运行能力恢复工作，并采取措施保障其今后的运作。尽管之前提供的紧急援助金额为 20,000 美元，但秘书处指出由于商品和服务成本上升，申请更高的金额是合理的。马尔代夫政府将为国家臭氧机构的恢复共同出资，在新的地点建造一个新的办公室。

秘书处的建议

28. 谨建议执行委员会考虑到国家臭氧机构在 2024 年 12 月大楼被大火烧毁后面临的情况，作为特例，为马尔代夫体制强化核准 30,000 美元的额外紧急援助。

B2：全球技术援助：国家臭氧官员和国家能效政策制定者结对以支持《基加利修正案》目标（第二阶段）

项目说明

29. 环境规划署提交了关于国家臭氧干事和国家能效政策制定者结对以支持《基加利修正案》目标¹²的全球技术援助项目第二阶段的申请，如表 1 第 B2 部分所示。

全球技术援助结对项目第一阶段最终进度报告

30. 在第 91 次会议上，执行委员会核准了环境规划署 2023-2024 年期间的结对项目，金额为 793,400 美元，外加机构支助费用 97,274 美元（第 91/42 号决定）。在第 95 次会议上，执行委员会将该项目作为环境规划署 2025 年履约协助方案预算申请的一部分审议了项目执行进度报告。随后，除其他外，委员会请环境规划署在 2025 年第一次会议上提交项目第二阶段时，提交一份最终报告，详细说明第一阶段执行中汲取的经验教训（第 95/83(d)号决定）。根据该决定，环境规划署提交了关于结对项目第一阶段的详细最终报告，该报告附于本文件之后，秘书处将其概述如下。

¹² 此处称为结对项目

结对项目第一阶段成果

31. 在 2023 至 2024 年期间，环境署区域履约协助方案小组组织了八次为期两天的讲习班，召集了来自以下区域第 5 条国家（发展中国家）的相关利益攸关方团体：非洲英语国家、非洲法语国家、加勒比、拉丁美洲、欧洲和中亚、南亚、东南亚、太平洋岛屿国家和西亚。为提高成本效益，这些讲习班与环境规划署的区域网络会议衔接举行。这些讲习班共使 422 名参加者能够讨论和交流战略，以最大限度地发挥向新制冷剂过渡对气候的影响，并提高制冷和空调部门的能效。

32. 结对讲习班强调了在不同第 5 条国家内部和之间开展合作以提高能效、推进臭氧层保护和气候倡议的重要性。利益攸关方确定了关键干预措施，以克服向可持续制冷和空调实践过渡的挑战，包括倡导综合环境政策、实施能效标准、建议高能效采购准则，以及加强相关当局之间的合作。

33. 从项目第一阶段汲取的主要经验教训包括：必须加强各部委和各行业之间的伙伴关系，统一各区域的最低能源性能标准和能源标签，以建立一致的市场框架，投资于先进技术并提供技术指导，扩展培训方案和能力建设倡议，促进跨区域合作，以推动采用可持续的节能冷却解决方案，开展提高公众认识的活动以推动消费者需求，创新融资机制和获取国际资金来源，以及建立强有力的监测和合规体系，确保有效执行政策框架。在设计项目第二阶段时，考虑了结对讲习班第一阶段的主要建议：

- (a) 应制定综合政策，纳入最低能源性能标准、能效标签和气候战略，并辅以执行机制、数据驱动的监测系统和定期评估，以确保持续进展；
- (b) 应开展综合培训活动，针对从政策制定者到技术人员的所有利益攸关方，重点是实用技能、技术创新和政策实施，确保全面解决能力差距；
- (c) 应推广创新的融资模式，如公私伙伴关系和奖励计划，以应对资金方面的挑战，在这方面，各国政府应重点加强能力，制定令人信服的筹资建议；
- (d) 应建立国家工作组，协调能效倡议，让包括学术机构、行业领袖和民间社会组织在内的广泛利益攸关方参与进来；
- (e) 以消费者为重点的宣传活动应强调节能技术的长期效益，包括节成本和环境优势。量身定制的信息传播战略应与当地受众产生共鸣，以最大限度地扩大影响；以及
- (f) 应编制针对具体区域的成功案例，将制冷剂过渡与能效增益完美结合，其中包括可衡量的影响、克服的实施挑战以及可复制的合作模式，并加以传播。

34. 报告第 1 至 4 页详细介绍了该项目的主要成果和经验教训；报告第 4 部分介绍了在逐步减少氢氟碳化物的同时提高能效的主要成就、面临的挑战、经验教训和建议。

全球技术援助结对项目第二阶段

35. 在核准全球技术援助结对项目第一阶段时，执行委员会明确指出，环境规划署可考虑制定第二阶段，该阶段将考虑到项目第一阶段举办讲习班的成果，并包括一项行动计划，以便基于项目成果满足通过执行第一阶段确定的任何区域需求（第 91/42(b)号决定）。环境规划署提交的全球技术援助结对项目第二阶段的申请符合第 91/42(b)、93/91(e)¹³和 95/83(d)号决定。

拟议的活动

36. 根据第一阶段的经验，第二阶段建议把重点放在增加利益攸关方的参与和更有效地利用知识资源上。将开发有针对性的信息和知识资源，如指导文件、案例研究、工具包¹⁴等，或改编自环境署在履约协助方案下开发的现有资源，为第二阶段的参与者提供实用的、针对具体区域的、随时可用的资源，帮助他们有效实施可持续冷却解决方案，并支持制定具体的实施计划。

37. 自核准之日起 30 个月的时间里，将开展以下活动：

- (a) 在技术专家的支持下，通过全面的区域差距分析建立基线知识，并为项目所有组成部分奠定基础，如确定所需的知识和信息资源（在前五个月实施）；
- (b) 在专题专家的支持下，编制高质量、针对具体区域的参考资料，以支持利益攸关方（例如政策制定者、技术人员、金融机构）在制冷空调和热泵的不同应用中逐步减少氢氟碳化物的背景下实施能效项目。参考资料还将包括案例研究，展示在逐步减少氢氟碳化物的同时提高能效的成功实施经验（在第 6-12 个月实施）；以及
- (c) 利用作为知识和信息资源开发的工具举办结对讲习班，并在不同地区传播信息以供实施。将对这些讲习班进行重新设计，以确保利益攸关方获得关于新开发材料的结构化指导，缩小知识获取和实地执行之间的差距（在第 13-30 个月实施）。

38. 环境规划署提交的拟议活动和拟议预算见下文表 2。

¹³ 也请环境规划署在 2024 年第二次会议上提交项目第二阶段时，提交一份最终报告，详细说明在执行国家臭氧官员和国家能效政策制定者结对以支持《基加利修正》目标的全球技术援助项目第一阶段中汲取的经验教训。

¹⁴ 包括如下资源：关于将制冷剂相关数据纳入最低能源性能标准和能源标签框架的制冷剂整合指南；市场监督工具包；用于评估制冷和空调设备性能的技术评估工具包；政策整合工具包；特定区域案例研究；以及最终用户资源。

表 2: 结对项目第二阶段拟议的活动和预算

预期成果	绩效指标	具体内容	供资 (美元)
第 1 部分: 准备和评估 (在第 1-5 个月实施)			
- 全面了解区域需求、差距和障碍。 - 规划跨行业合作的体制框架和协调机制。 - 记录最佳实践和成功案例研究。 - 根据区域优先事项设计讲习班的循证框架。	(i) 与九名区域技术专家签约。	九个区域每区域一名专家, 编写区域评估报告, 制定讲习班框架和方法, 规划和举办结对讲习班。	135,000
	(ii) 九份区域评估报告定稿, 包括详细的差距分析和建议。 (iii) 在至少 70% 的参与国规划体制协调机制。 (iv) 每个区域至少记录三项成功的案例研究, 涵盖政策、技术和财务方面, 由区域专家编写和验证, 确保与确定的需求相一致。	调查软件, 数据分析工具和分析框架。	1,200
第 2 部分: 知识和信息资源开发 (在第 6-12 个月实施)			
- 针对区域挑战开发一套量身定制的工具包和资源。 - 建立在线知识共享平台。 - 对材料进行区域定制和翻译, 以提高可用性。 - 加强利益攸关方将提高能效与制冷剂过渡相结合的能力。	(i) 开发多达五个综合工具包, 与利益攸关方进行同行审查和测试。	内容开发专家, 制作多达五个工具包和信息资源。	116,000
	(ii) 在线平台在第一年内启动并运行。	材料的平面设计、排版和制作。	10,000
	(iii) 根据各国的具体需求, 每个工具包至少有两个定制的区域性改编版本。	将材料翻译成区域语言。	29,000
	(iv) 至少使用三种语言进行翻译, 确保广泛普及。	在线资源库的网络开发。	2,000
第 3 部分: 结对讲习班 (在第 13-30 个月实施)			
- 加强利益攸关方根据《基加利修正案》的承诺实施能效项目的技术和体制能力。 - 改善跨行业合作, 促进综合政策和技术的采用。 - 为可持续冷却倡议提高金融知识水平并加强供资机制。	(i) 在所有区域网络中至少有 250 个利益攸关方积极参与。	与来自 147 个国家的国家臭氧官员和国家能效政策制定者在区域网络会议后衔接举行了 9 次区域结对讲习班 (国家臭氧机构仅支付额外几天的每日生活津贴)。	350,000
	(ii) 每个区域至少有一个国家建立或加强正式的协调机制。	支持 10 个区域能效组织出席	50,000
	(iii) 至少举办九次有多行业代表参加的区域讲习班。	20 名专家为讲习班提供支持	100,000
共计			793,200

秘书处的评论¹⁵

39. 秘书处请环境规划署说明结对项目第二阶段如何考虑到从以前的结对讲习班吸取的经验教训; 在与第 5 条国家能源办事处合作制度化方面的预期产出是什么, 以及该项目如何支持执行委员会关于环境规划署通过执行履约协助方案¹⁶向低消费量国家提供技术和政策援助的决定。秘书处还询问了所申请的资金, 以及如何使其与履约协助方案预算相协调,

¹⁵ 秘书处对结对项目第一阶段报告的评论已与对项目第二阶段申请的评论合并。

¹⁶ 第 93/95 (d) 号决定

特别是在国家臭氧机构网络会议方面；以及可以建立哪些联系，以支持或有利于多边基金特别是根据第 89/6 号决定所资助的能效项目。

40. 关于加强国家臭氧机构、能效当局和不同决策机构之间的协调，环境规划署解释说，强调了这一点的重要性，并在结对讲习班期间阐述和讨论了不同的模式。在第二阶段，将在第 1 部分下确定体制框架、结构性障碍、具体干预措施以及加强协调机制所需的支助；这些内容将在第 2 部分创建的知识和信息资源中进行阐述，例如设计和执行国家协调机制的工具包；在第 3 部分的结对讲习班上，将支持各国制定行动计划。环境规划署解释了在第 1 部分进行的区域评估将如何考虑现有资源和倡议，如太平洋家电数据库，将对该数据库进行评估，以便在其他国家扩展和复制此类数据。

41. 关于与根据第 89/6 号决定执行多边基金资助的能效项目之间的联系，环境规划署解释说，将通过拟议的“制冷剂一体化准则”支持各区域统一最低能源性能标准和能源标签，该准则涵盖将制冷剂质量参数纳入最低能源性能标准，以及评估包括制冷剂质量在内的制冷和空调系统性能的工具包。此外，“政策整合工具包”将支持各区域协调最低能源性能标准和能源标签标准，以促进贸易和技术采用的一致性。

42. 环境规划署进一步解释说，在第一阶段的一些讨论中，制冷、空调和热泵设备的测试设施被确定为一个重大问题，相互认可协定是一个具有成本效益的机制，可以促进使用经认可的实验室进行评估的一致性。在第二阶段，环境规划署计划开发“市场监督工具包”，其中包括产品测试和市场审计协议，以及“技术评估工具包”，为基于全球标准的标准化测试协议提供指导。

43. 关于为维修技术人员提供培训支持的好处，环境规划署解释说，该项目将利用最新定稿的全面的《环境规划署-美国采暖制冷与空调工程师学会¹⁷制冷和空调工厂可持续性技术指南》作为基础资源，该指南在可持续制冷和空调设备运行的八个方面提供了随时可用的核对表、最佳实践和绩效指标，包括关于高能效运行和技术人员能力的专门章节。该工具包还将涵盖与认证计划的实施技术人员以及相关政策和措施有关的进一步准则。环境规划署还与欧洲制冷、空调与热泵承包商协会合作，为技术人员开发一个能效培训模块，作为环境规划署-欧洲制冷空调与热泵承包商协会培训手册的补充模块。

44. 关于促进国家层面认识和宣传活动，环境规划署解释说，在第一阶段讨论了让零售商、私营部门实体和最终用户等更广泛的利益攸关方群体参与提高能效的问题，并分享了若干实例。在第二阶段，将针对可能影响制冷、空调和热泵设备设计和采购的不同利益攸关方编制和分发资源材料，以便在国家一级实施。

45. 关于纳入正在进行的能效相关项目成果（例如根据第 89/6、91/65 和 94/60 号决定核准的项目以及其他非多边基金资助的项目），环境规划署解释说，项目第二阶段将包括对正在进行的能效项目进行系统摸底，以便在开发知识和信息资源以及举办分享能效项目经验的讲习班时利用所吸取的经验教训。环境规划署还将与现有的区域能效组织合作，并利用环境规划署的联合能效倡议（U4E）。

¹⁷ 美国采暖、制冷与空调工程师学会

46. 环境规划署还解释说，在第一阶段，确定需要对各国现有的体制结构提供更多投入，并制定符合各国具体情况的有针对性的干预措施。请求提供的技术支持将用于执行这一分析，并将分析纳入结讲习班和知识工具的设计。

47. 关于编制更多信息材料和工具包的必要性，环境署解释说，预期材料是政策雄心与实际执行之间的缺失环节。没有这些材料，从国家决策者到地方技术人员的各级利益攸关方都缺乏将共享知识转化为可行步骤所需的技术指导、标准化程序和参考基准。开发有针对性的信息资料和工具包至关重要，其根本原因有三，包括帮助各国避免制定不一致的方法和解决障碍；在主要利益攸关方之间创造共同语言和共同理解；以及收集最佳实践和案例研究，使各国能够避免共同障碍，特别是在实施基加利氢氟碳化物执行计划方面。

48. 关于利用制冷空调和热泵设备政策和技术方面现有的资源材料，环境规划署解释说，将利用联合能效倡议（U4E）、人人享有可持续能源（SE4All）、区域能效中心和其他机构新开发的能效资源来编制资源材料，环境规划署和联合能效倡议将合作设计列入项目第二阶段的新资源。环境规划署还解释说，在第一阶段的执行过程中，各国都强调了与区域能效中心建立伙伴关系的重要性，它们与联合能效倡议开展了密切合作，并与参与者分享了资源材料。环境规划署还提到区域能效组织也参加了结对讲习班。

49. 为了在已完成的结对项目第一阶段和拟议的第二阶段之间划清界限，要求环境规划署编制一份比较文件，说明两个阶段在战略目标、活动、利益攸关方、知识资源、体制协调和其他参数方面的差异和互补性。环境规划署提供了所需的比较文件，载于本文件附件三。

50. 关于国家臭氧机构和其他利益攸关方继续使用知识工具的问题，环境规划署解释说，所有知识工具都将以在线平台可访问的数字格式开发，包括定期更新和版本控制功能，以保持相关性。此外，讲习班将包括关于在项目时限之外利用这些资源的专门会议，以确保可持续的影响和与正在进行的氢氟碳化物逐步减少活动相结合。环境规划署还提到，他们将在讲习班期间就具体主题举行简短的在线讨论会议。

51. 关于利用第 93 次会议为环境规划署 2024 至 2026 三年期核准的额外资金，为低消费量国家执行基加利氢氟碳化物执行计划提供技术和政策支助的问题，环境规划署解释说，这些资金目前与能效没有具体关系，因此与第二阶段项目没有直接联系。

绩效指标

52. 关于绩效指标，环境规划署解释说，这是一个能力建设项目，很难与第 5 条国家的后续行动建立直接联系；但项目确定了有时限的活动水平指标，见上文表 2。秘书处指出，尽管活动水平指标很重要，但仍需要与提高制冷和空调设备能效成果有关的具体绩效目标，以评估项目的实际实施影响。环境规划署同意包括表 3 所概括的四类成果层面的绩效指标。

表 3: 环境规划署所列成果层面的绩效指标

成果类别	绩效指标
1. 运行监测工具	

成果类别	绩效指标
第 1 部分：开发并实施监测/跟踪工具，定期跟踪各国采纳和执行与《基加利修正案》有关的能效政策和技术措施的情况。	(i) 完成区域评估报告。 (ii) 开发监测/跟踪工具，以评估如下领域的进展： - 最低能源性能标准和能效标准 - 建筑规范和评级方案 - 创新融资机制 - 冷却行业的能效培训 - 市场监督方案 - 结对项目期间和之后发起的公众和最终用户宣传活动。
2. 多边基金能效项目知识交流（第 89/6 和 91/65 号决定）	
- 第 1 部分：收集与分析项目经验。 - 第 2 部分：记录案例研究与成功案例。 - 第 3 部分：分享与讨论结对讲习班期间汲取的经验教训。	(i) 记录第 89/6 和 91/65 项目的主要经验教训。 (ii) 将案例研究纳入培训材料和结对讲习班内容。 (iii) 举办能效项目经验交流会的次数。
3. 协调机制的建立	
- 第 1 部分：摸清现有协调结构。 - 第 2 部分：制定协调准则和模板。 - 第 3 部分：促进利益攸关方在结对讲习班中的协调。	(i) 开发建立国家协调机制的工具包。 (ii) 臭氧和能效利益攸关方在国家层面发起的联合协调倡议的数目。
4. 能力建设资源开发	
- 第 1 部分：评估区域能力建设需求。 - 第 2 部分：编制培训材料。 - 第 3 部分：资源传播并应用于结对讲习班。	(i) 完成能力需求评估（政策和技术领域）。 (ii) 为政策和维修行业开发培训工具。 (iii) 利用项目资源和工具培训利益攸关方的数量。 (iv) 纳入基加利氢氟碳化物执行计划的资源和工具数量。

第二阶段供资数额

53. 环境规划署解释说，拟议的讲习班将继续与区域网络会议衔接举行，以优化成本，而且只申请能源主管部门和专家参与所需的额外费用，因为这些费用无法由履约协助方案匀支。环境规划署提供了一份订正的拟议预算，如下文表 4 所示，对预算分配略有调整，但申请的供资数额与最初的提案相同。

表 4: 结对项目第二阶段的订正预算

项	说明	金额（美元）
第 1 部分：准备和评估		
区域技术专家（能效）	每区域一名专家，支持分析和编制区域评估报告，制定讲习班框架和方法，并规划和举办结对讲习班*	157,000
需求评估工具	调查软件，数据分析工具和分析框架	1,200
区域评估报告	分析、编写和制定评估报告	0
小计		158,200
第 2 部分：知识和信息资源开发		
专题顾问/专家	内容开发专家，制作多达五个工具包和信息资源类别**	139,000
设计和制作	材料的平面设计、排版和制作	10,000
翻译	将材料翻译成区域语言	29,000
数字平台开发	在线资源库的网络开发	2,000
小计		180,000
第 3 部分：结对讲习班		

差旅和每日生活津贴	来自 147 个国家的国家臭氧官员和国家能效政策制定者 (国家臭氧机构仅负责额外日期的费用)	350,000
	10 名来自区域能效组织的参与者	35,000
	20 名专家	70,000
讲习班场所和后勤	9 次区域讲习班包括场所租赁、设备和支助服务	0
	小计	455,000
	合计	793,200

* 增加资金以确保对项目所有组成部分的一致性支持，特别是在纳入新的绩效指标之后。

** 开发综合工具包和知识资源所需的增加资金。

秘书处的建议

54. 谨建议执行委员会：

- (a) 注意到 UNEP/OzL.Pro/ExCom/96/21 号文件所载环境规划署提交的关于国家臭氧官员和国家能效政策制定者结对以支持《基加利修正案》目标的全球技术援助项目（第一阶段：2023-2024 年）执行情况的最终报告；
- (b) 考虑核准关于国家臭氧官员和国家能效政策制定者结对以支持《基加利修正案》目标的全球技术援助项目（第二阶段：2025-2027 年），金额为 793,200 美元，外加给环境规划署的 97,252 美元机构支助费用，但有一项谅解，即：
 - (i) 环境规划署将向执行委员会 2026 年最后一次会议提交一份关于项目执行进展情况的中期报告，作为环境规划署履约协助方案进度报告的一部分，并向执行委员会 2027 年最后一次会议提交最终进度报告；以及
 - (ii) 项目第二阶段的任何余额将迟于执行委员会 2028 年第二次会议之前退还多边基金。

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS¹

Angola: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNEP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Nov-02 & Apr-04	241,030
Phase II:	Nov-06	151,872
Phase III:	Apr-11	134,400
Phase IV:	Apr-13	134,400
Phase V:	May-15	134,400
Phase VI:	Nov-17	172,032
Phase VII:	Dec-19	172,032
Total:		1,140,166
Amount requested for renewal (phase VIII) (US \$):		356,106
Amount recommended for approval for phase VIII (US \$):		356,106
Agency support costs (US \$):		0
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US \$):		356,106
Date of approval of country programme:		2002
Date of approval of HCFC phase-out management plan:		2011
Date of approval of Kigali HFC implementation plan:		n/a
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):		
(a) Annex B, Group III (methyl chloroform) (average 1998-2000)		0
(b) Annex C, Group I (HCFCs) (average 2009-2010)		16
(c) Annex E (methyl bromide) (average 1995-1998)		0
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)		3,878,000
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:		
(a) Annex B, Group III (methyl chloroform)		0.00
(b) Annex C, Group I (HCFCs)		3.82
(c) Annex E (methyl bromide)		0.00
Total:		3.82
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7		13,218,297
Year of reported country programme implementation data:		2023
Amount approved for projects (as at December 2024) (US \$):		3,789,726
Amount disbursed (as at December 2023) (US \$):		3,047,809
ODS to be phased out (as at December 2024) (ODP tonnes):		108.4
ODS phased out (as at December 2023) (ODP tonnes):		108.6

1. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,062,093
(b) Institutional strengthening:	1,140,166
(c) Project preparation, technical assistance, training and other non-investment projects:	1,587,467
Total:	3,789,726
(d) HFC activities funded from additional voluntary contributions	150,000

Progress report

¹ Data as at December 2023 are based on document UNEP/OzL.Pro/ExCom/95/17.

2. During phase VII, Angola's NOU effectively implemented key activities supporting the HCFC phase-out and laying the groundwork for the HFC phase-down, in alignment with the country's obligations under the Montreal Protocol and Kigali Amendment. The NOU conducted extensive capacity-building sessions, training customs officers, RAC technicians, and enforcement officials on proper refrigerant handling, regulatory compliance, and illegal trade prevention, including the provision of refrigerant identifiers. Stakeholder engagement was reinforced through regular consultations with customs authorities, and public awareness was promoted via targeted outreach at major events like World Ozone Day, which featured roadshows, seminars, and educational materials. Gender inclusion was actively pursued by encouraging the participation of female technicians through collaboration with professional associations. Enhanced coordination between the NOU and relevant agencies strengthened data collection and reporting systems for controlled substances. Angola also shared experiences and learned best practices by participating in regional and international meetings.

Plan of action

3. Moving forward, Angola's NOU will implement a comprehensive plan to sustain progress in HCFC phase-out and HFC phase-down, focusing on policy enforcement, capacity-building, and stakeholder engagement. Key actions include strengthening the licensing and quota systems, expanding training programmes for customs officers, enforcement agencies, and RAC technicians, and promoting public awareness. The NOU will enhance compliance through tighter border controls and provision of refrigerant identifier, while also advancing energy efficiency projects. Improved data collection and reporting mechanisms will be established in collaboration with customs and importers. Angola will continue engaging in regional and international forums, exploring South-South cooperation with Portuguese-speaking countries, and promoting gender inclusivity by encouraging the participation of women in training and technical fields. These collective efforts will ensure continued compliance with Montreal Protocol obligations.

Sustainability and risk assessment

4. To ensure the long-term sustainability of these efforts, the country must address key risks, including regulatory and enforcement challenges that require strengthened institutional capacity and monitoring systems. Sustained capacity building is essential to mitigate knowledge loss due to staff turnover, while ongoing training for technicians, customs officials, and other stakeholders remains critical. The threat of illegal trade in ODS highlights the need for reinforced border controls, provision of refrigerant identifiers, and enhanced regional cooperation. Additionally, maintaining public awareness through continuous outreach remains vital. By proactively managing these risks, Angola seeks to secure compliance with Montreal Protocol obligations.

El Salvador: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNEP
Amounts previously approved for institutional strengthening (US \$):			
	Phase I:	May-97	75,597
	Phase II:	Dec-00	50,398
	Phase III:	Nov-02	57,980
	Phase IV:	Dec-04	60,000
	Phase V:	Jul-07 & Nov-08	60,000
	Phase VI:	Dec-22	120,000
		Total:	423,975*
Amount requested for renewal (phase VII) (US \$):			180,000
Amount recommended for approval for phase VII (US \$):			180,000
Agency support costs (US \$):			0

Summary of the project and country profile	
Total cost of institutional strengthening phase VII to the Multilateral Fund (US \$):	180,000
Date of approval of country programme:	1997
Date of approval of HCFC phase-out management plan:	2011
Date of approval of Kigali HFC implementation plan:	2024
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):	
(a) Annex A, Group I (CFCs) (average 1995-1997)	306.5
(b) Annex A, Group II (halons) (average 1995-1997)	0.7
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)	0.0
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)	0.0
(e) Annex C, Group I (HCFCs) (average 2009-2010)	11.7
(f) Annex E, (methyl bromide) (average 1995-1998)	1.4
(g) Annex F, (HFCs) (average 2020-2022 plus 65% of HCFC baseline)	922,362
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:	
(a) Annex A, Group I (CFCs)	0.00
(b) Annex A, Group II (halons)	0.00
(c) Annex B, Group II (carbon tetrachloride)	0.00
(d) Annex B, Group III (methyl chloroform)	0.00
(e) Annex C, Group I (HCFCs)	4.66
(f) Annex E, (methyl bromide)	0.00
Total:	4.66
(g) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7	1,122,854
Year of reported country programme implementation data:	2023
Amount approved for projects (as at December 2024) (US \$):	4,917,650
Amount disbursed (as at December 2023) (US \$):	4,059,652
ODS to be phased out (as at December 2024) (ODP tonnes):	399.2
ODS phased out (as at December 2023) (ODP tonnes):	373.1

*Excluding US \$245,000 approved for institutional strengthening project and incorporated into stage I of the HCFC phase-out management plan (HPMP) for El Salvador.

5. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	2,025,090
(b) Institutional strengthening:	423,975
(c) Project preparation, technical assistance, training and other non-investment projects:	2,468,584
Total:	4,917,650
(d) HFC activities funded from additional voluntary contributions	0

Progress report

6. The implementation of Montreal Protocol activities in El Salvador is continuing with significant progress. The Kigali Amendment to the Montreal Protocol was ratified, and the regulatory framework for HFC licensing and quotas was established through Executive Decree No. 10 (February 2024) and Ministerial Decree No. 14 (July 2024). Revision of import quotas and regulations for HCFCs, including the ban on HCFC-141b in polyols were implemented. All required reports under Article 7 of the Montreal Protocol and the country programme were submitted on time. However, HCFC consumption in 2021, 2022, and 2023 exceeded the maximum allowable levels established in the Agreement with the Executive Committee. The Government of El Salvador has taken steps to ensure that consumption returns to compliance in 2024. Ministerial Agreement No. 343 (December 2024) introduced stricter controls on the importation of refrigeration and air-conditioning (RAC) equipment containing controlled substances. Industry training and awareness-raising programmes were conducted, focusing on the transition to low-

GWP refrigerants. A national workshop on Good Refrigeration Practices was held in November 2024, engaging 203 participants (44 women). Collaboration with ASAIR (Salvadoran Air Conditioning and Refrigeration Association) was strengthened to improve workforce training and technical certification. Customs officers received specialized training on the identification and classification of controlled substances. Multiple outreach campaigns were conducted, including the World Ozone Day celebrations, with a focus on alternative refrigerants. Gender integration efforts included six dialogue sessions with women in the RAC sector, leading to the formulation of a Gender Inclusion Roadmap for future initiatives. Promotional materials, such as educational booklets and reusable bags, were distributed to reinforce awareness about ozone layer protection and climate change mitigation.

Plan of action

7. Phase VII of the IS project will build on previous successes and further strengthen El Salvador's institutional capacity, regulatory framework, and stakeholder engagement to meet its Montreal Protocol commitments. It will continue enforcing the ban on HCFC-based RAC equipment imports; continue issuing import licenses and quotas for all substances controlled under the Montreal Protocol; submit timely and accurate reports on HCFC and HFC consumption; ensure continuous verification and validation of import data through cross-checking with customs and importers; conduct specialized training workshops for customs officers, and enforcement authorities on the identification and handling of controlled substance, implement a joint inspection programme with customs authorities to prevent the illegal trade of controlled substances; develop and distribute educational materials targeting different stakeholder groups, including technicians, importers, and the general public; organize the World Ozone Day and the World Refrigeration Day to highlight advancements in ozone protection and climate-friendly cooling technologies; conduct workshops and consultations to ensure gender mainstreaming in all project activities, and promote the active role of women in technical fields, particularly in refrigeration and air conditioning.

Sustainability and risk assessment

8. The sustainability of El Salvador's IS project is upheld through a comprehensive approach that combines regulatory frameworks, institutional capacity development, inter-agency collaboration, and public-private partnerships. The NOU, operating under the Ministry of Environment and Natural Resources (MARN), is a well-established entity that continuously enhances its human resource capabilities. Furthermore, ongoing training programmes for customs officers, technicians, and industry stakeholders play a crucial role in preserving and expanding technical expertise. Additionally, the integration of gender policies across all project activities—through the implementation of the Gender Inclusion Roadmap—fosters a more inclusive and sustainable workforce within the RAC sector. Regarding the existing risks associated with the project's implementation, the primary risk identified is political changes and institutional restructuring. A key mitigation strategy is to raise awareness among new authorities about the project's significance for both the country and the protection of the ozone layer. Additionally, fostering long-term institutional memory through standardized procedures and comprehensive documentation is essential. It is equally important maintaining a close coordination to ensure timely fund allocations and to establish contingency plans to address potential financial constraints or changes in government.

Ethiopia: Renewal of institutional strengthening

Summary of the project and country profile				
Implementing agency:				UNEP
Amounts previously approved for institutional strengthening (US \$):				
Phase I:		Oct-96		68,365
Phase II:		Nov-99		45,539
Phase III:	Apr-03 &	Dec-03		52,432
Phase IV:		Nov-06		60,000
Phase V:	Nov-09 &	Apr-10		60,000

Summary of the project and country profile			
	Phase VI:	Nov-14	60,000
	Phase VII:	Dec-16	85,000
	Phase VIII:	Dec-20	85,000
	Phase IX:	Jun-22	85,000
		Total:	601,336
Amount requested for renewal (phase X) (US \$):			180,000
Amount recommended for approval for phase X (US \$):			180,000
Agency support costs (US \$):			0
Total cost of institutional strengthening phase X to the Multilateral Fund (US \$):			180,000
Date of approval of country programme:			1996
Date of approval of HCFC phase-out management plan:			2012
Date of approval of Kigali HFC implementation plan:			n/a
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):			
(a)	Annex B, Group III (methyl chloroform) (average 1998-2000)		0.5
(b)	Annex C, Group I (HCFCs) (average 2009-2010)		5.5
(c)	Annex E (methyl bromide) (average 1995-1998)		15.6
(d)	Annex F, (HFCs) (average 2020-2022 plus 65% of HCFC baseline)		347,035
Latest reported ODS consumption (2024) (ODP tonnes) as per Article 7:			
(a)	Annex B, Group III (methyl chloroform)		0.00
(b)	Annex C, Group I (HCFCs)		1.02
(c)	Annex E (methyl bromide)		0.00
	Total:		1.02
(d)	Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7		45,035
Year of reported country programme implementation data:			2023
Amount approved for projects (as at December 2024) (US \$):			1,913,097
Amount disbursed (as at December 2023) (US \$):			1,452,320
ODS to be phased out (as at December 2024) (ODP tonnes):			30.7
ODS phased out (as at December 2023) (ODP tonnes):			12.3

9. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	212,688
(b) Institutional strengthening:	601,336
(c) Project preparation, technical assistance, training and other non-investment projects:	1,099,073
Total:	1,913,097
(d) HFC activities funded from additional voluntary contributions	95,000

Progress report

10. Ethiopia continues to successfully implement its obligations under the Montreal Protocol, advancing efforts to phase out ozone-depleting substances (ODS) through sustained regulatory, institutional, and stakeholder-driven actions. Phase IX of the IS project was implemented effectively, with all indicators fully achieved. The NOU, housed within the Ethiopian Environmental Protection Authority (EEPA), led the coordination of a wide range of activities including the development of a draft amendment to Proclamation 716/2011 to incorporate Kigali Amendment provisions, the operationalization of a national licensing and quota system for HCFCs and HFCs, and periodic quota allocations to registered importers. Over 200 customs and law enforcement officers were trained on ODS control measures, and identifiers were procured and distributed to key border points to strengthen enforcement. Public awareness was enhanced through targeted campaigns via electronic and traditional media, and over 240 staff members of the EPA were sensitized on low-GWP alternatives. Ethiopia also commemorated World Ozone Day in 2023

and 2024 through national media outreach and public discussions. National and inter-agency coordination was reinforced through annual meetings of the National Ozone Steering Committee and active collaboration with customs, trade, education, and standards institutions. The NOU ensured regular submission of Article 7 and country programme data, supported training on Harmonized System code classification, and engaged stakeholders on gender mainstreaming. Ethiopia actively participated in regional and global Montreal Protocol meetings and successfully submitted funding requests for second tranche of stage II of the HPMP, the preparation of national inventories of banks of unwanted substances, and the Kigali HFC implementation plan. These collective efforts reflect Ethiopia's strong institutional commitment and continued compliance with the Montreal Protocol.

Plan of action

11. For phase X of the IS project, the NOU will continue to lead efforts to ensure full compliance with the Montreal Protocol and its amendments, with a focus on phasing out HCFCs by 2030. The plan of action emphasizes capacity building through comprehensive training for refrigeration technicians, customs officers, and enforcement agencies; strengthening of the policy and regulatory framework by maintaining licensing and quota systems and finalizing MEPS; and enhancing data monitoring and reporting systems to ensure timely submission of Article 7 and country programme data. Public awareness will be expanded through targeted campaigns, annual World Ozone Day celebrations, and increased stakeholder engagement. The NOU will also foster regional and international cooperation by actively participating in Montreal Protocol meetings and collaborating with other countries to exchange best practices and improve enforcement mechanisms.

Sustainability and risk assessment

12. To ensure the long-term sustainability of Montreal Protocol projects in Ethiopia, a comprehensive monitoring, evaluation, and enforcement framework has been put in place. The EEPA, in collaboration with the NOU, oversees project implementation, ensuring compliance with phase-out and phase-down targets for ODS and HFCs. There are sustainability measures in place including: institutional strengthening where the NOU continues to build the capacity of key stakeholders, including customs officers, environmental inspectors, and refrigeration technicians, to ensure sustained enforcement of regulations; policy and regulatory framework – integration of Montreal Protocol commitments into national policies and regulations, such as the licensing and quota system, ensures long-term compliance; public awareness and education – continuous sensitization campaigns, stakeholder engagement, and technical training promote the adoption of low-GWP and energy-efficient technologies; stakeholder collaboration – strengthened inter-agency coordination between the Ministry of Trade, Customs Commission, and industry associations ensures effective enforcement of import controls and best practices in the RAC sector; dedicated monitoring personnel – two employees of the EEPA are specifically assigned to monitor project activities, track implementation progress, and report on any challenges that may affect the continuity and effectiveness of the project. As part of the risk management regular monitoring, enforcement actions, and stakeholder training are in place help ensure adherence to licensing and quota systems. The NOU has also taken measures to strengthen border controls through improved data tracking, and procurement of identifiers in efforts to mitigate risks associated with smuggling and unregulated imports. capacity-building initiatives have remained at the forefront of activities implemented and have included refresher training and technical workshops to ensure continued expertise in implementing Montreal Protocol commitments. By implementing these sustainability measures and risk management strategies, Ethiopia ensures the continued success of aligning with international commitments under the Montreal Protocol and Kigali Amendment.

Namibia: Renewal of institutional strengthening

Summary of the project and country profile	
Implementing agency:	UNEP
Amounts previously approved for institutional strengthening (US \$):	

Phase I:	Nov-95	69,794
Phase II:	Jul-00	46,530
Phase III:	Dec-03	53,530
Phase IV:	Nov-05	60,000
Phase V:	Nov-07	60,000
Phase VI:	Nov-09	46,500.00
Phase VII:	Apr-12	60,000
Phase VIII:	Nov-14	60,000
Phase IX:	Jul-17	65,000.00
Phase X:	Dec-19	85,000
Phase XI:	Nov-21	85,000
	Total:	691,354
Amount requested for renewal (phase XII) (US \$):		180,000
Amount recommended for approval for phase XII (US \$):		180,000
Agency support costs (US \$):		0
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		180,000
Date of approval of country programme:		1995
Date of approval of HCFC phase-out management plan:		2011
Date of approval of Kigali HFC implementation plan:		n/a
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):		
(a) Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
(b) Annex C, Group I (HCFCs) (average 2009-2010)		8.4
(c) Annex E, (methyl bromide) (average 1995-1998)		0.8
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)		774,924
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:		
(a) Annex B, Group III (methyl chloroform)		0.00
(b) Annex C, Group I (HCFCs)		0.26
(c) Annex E (methyl bromide)		0.00
Total:		0.26
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7		730,358
Year of reported country programme implementation data:		2023
Amount approved for projects (as at December 2024) (US \$):		2,999,829
Amount disbursed (as at December 2023) (US \$):		2,360,260
ODS to be phased out (as at December 2024) (ODP tonnes):		25.6
ODS phased out (as at December 2023) (ODP tonnes):		20.3

13. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,193,425
(b) Institutional strengthening:	691,354
(c) Project preparation, technical assistance, training and other non-investment projects:	1,115,050
Total:	2,999,829
(d) HFC activities funded from additional voluntary contributions	150,000

Progress report

14. During the reporting period, Namibia's NOU successfully implemented Montreal Protocol activities under the IS project, ensuring continued national compliance with the Protocol and its amendments. Key achievements included the enforcement of updated ODS and HFC regulations, enhanced cooperation with customs to curb illegal trade, and comprehensive capacity-building programmes that trained over 60 customs officers and numerous RAC technicians in the safe handling of low-GWP alternatives. Public awareness was boosted through media campaigns and the celebration of World Ozone

Day 2024. The NOU also participated in regional and international meetings to share best practices, maintained active monitoring systems such as iPIC, and seized illegal ODS consignments. Additionally, strong efforts were made to mainstream gender, including the training of 12 female RAC technicians and the establishment of a Women's RAC Association to support inclusive participation in the sector.

Plan of action

15. Namibia's NOU will continue to implement the IS project to ensure national compliance with the Montreal Protocol and its amendments. The next phase of implementation focuses on strengthening technical capacity through targeted training for RAC technicians, customs officers, and policymakers, with an emphasis on gender inclusion. Regulatory enforcement will be enhanced through active monitoring of the licensing and quota system, deployment of refrigerant identifiers at border posts, and improved data reporting. Public awareness will be promoted via mass media campaigns, stakeholder workshops, and distribution of educational materials to encourage adoption of low-GWP, energy-efficient alternatives. Additionally, the NOU will strengthen regional and international cooperation by participating in relevant network and global meetings to support knowledge exchange and alignment with evolving global standards.

Sustainability and risk assessment

16. Namibia's NOU will ensure sustainability through continued support from the Ministry of Industrialization and Trade, which will provide infrastructure, budgetary integration, and logistical resources. To manage risks, the NOU will mainstream Montreal Protocol activities into national policies, strengthen staff retention and training, and enhance enforcement through improved customs collaboration and refrigerant detection tools. Institutional support will be safeguarded by embedding Montreal Protocol activities into national frameworks and maintaining high-level engagement. The NOU will also address illegal trade through regional cooperation and stricter monitoring, while bridging workforce gaps with expanded training and awareness efforts.

附件二

执行委员会就提交第九十六次会议的体制强化项目的延长发表的意见草案

安哥拉

1. 执行委员会审查了申请延长安哥拉体制强化项目的报告，并赞赏地注意到安哥拉向基金秘书处报告了2023年国家方案数据，并向臭氧秘书处报告了《蒙特利尔议定书》第7条下的数据，表明该国遵守了《蒙特利尔议定书》。委员会注意到安哥拉政府努力与国家利益攸关方保持高效合作，并开展提高认识活动，包括在世界臭氧日期间。委员会还注意到该国积极参加区域网络和《蒙特利尔议定书》会议。因此，执行委员会希望即将到来的阶段将协助安哥拉履行《蒙特利尔议定书》义务，同时确保将性别主流化纳入《蒙特利尔议定书》活动的执行中。

萨尔瓦多

2. 执行委员会审查了申请延长萨尔瓦多体制强化项目的报告。委员会注意到萨尔瓦多继续致力于执行《蒙特利尔议定书》，包括在提高公众认识、与主要利益攸关方接触以及与国家当局和海关协调方面的积极努力。委员会还注意到取得了重大成就，包括建立了氢氟碳化物许可证和配额制度，通过专门培训加强了海关能力，以及通过国家讲习班积极推广良好制冷实践。委员会还注意到纳入了性别考虑因素，包括制定《性别包容路线图》和与制冷和空调行业的女性举行专门的对话会议。委员会还注意到，虽然在数据准确性和海关协调方面遇到了挑战，导致超过了《蒙特利尔议定书》下承诺的消费量阈值，但萨尔瓦多表现出了对纠正行动的坚定承诺。委员会还承认萨尔瓦多继续努力加强对区域和国际会议的参与，并在相关机会出现时开放参与南南合作。

埃塞俄比亚

3. 执行委员会审查了申请延长埃塞俄比亚体制强化项目的报告，并赞赏地注意到埃塞俄比亚向基金秘书处报告了2023年和2024年国家方案数据，并向臭氧秘书处报告了《蒙特利尔议定书》第7条下的数据，表明该国遵守了《蒙特利尔议定书》。委员会承认埃塞俄比亚继续执行其氟氯烃进出口许可证和配额制度；对制冷技术员和海关官员进行了培训；制定和组织了提高公众认识的活动。因此执行委员会相信，埃塞俄比亚政府将继续开展活动，使该国能够履行《蒙特利尔议定书》规定的义务。

纳米比亚

4. 执行委员会审查了申请延长纳米比亚体制强化项目的报告，并赞赏地注意到该国履行了数据报告义务以及《蒙特利尔议定书》的淘汰和逐步减少要求。委员会注意到纳米比亚政府努力与国家利益攸关方保持高效合作，并开展提高认识活动，包括在世界臭氧日期间。执行委员会还注意到该国积极参加区域网络和《蒙特利尔议定书》会议。因此，执行委员会希望即将到来的阶段将协助纳米比亚履行《蒙特利尔议定书》义务，同时确保将性别主流化纳入《蒙特利尔议定书》活动的执行中。

Annex III

COMPARATIVE ANALYSIS: GLOBAL TECHNICAL ASSISTANCE TWINNING PROJECT PHASE I VERSUS PHASE II (As submitted by UNEP)

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
1. Vision	- Created a collaborative platform connecting different stakeholders to advance Kigali Amendment objectives - Facilitated knowledge exchange through regional workshops, enabling countries to share successful strategies and learn from peers' experiences. - Discussed regional cooperation to harmonize standards and coordinate sustainable cooling initiatives. But challenges remained in operationalizing insights and knowledge due to: - Lack of tailored information resources - Limited access to structured technical guidance - Need for standardized knowledge tools applicable at national and regional levels.	- Increase stakeholder involvement and optimize resource use by developing and disseminating comprehensive, practical information tools to support sustainable cooling solutions. - Equip stakeholders with ready-to-use resources that will be integrated into refined twinning workshops, ensuring discussions lead to concrete implementation strategies. - Strengthen national and regional capacities through workshops that foster policy harmonization and accelerate Kigali Amendment-aligned transitions across participating countries. - Develop high-quality, region-specific materials that empower policymakers, technicians, and financial stakeholders, bridging knowledge gaps and catalyzing informed decision-making. - Document and share case studies demonstrating the integration of refrigerant transitions with energy efficiency improvements, laying the foundation for future workshops.
2. Strategic objectives	- Foster collaboration between NOOs, NEEPs, and FMFPs - Enhance communication and coordination among stakeholders - Share success stories and experiences - Facilitate better coordination between NOOs and government stakeholders - Raise awareness about available funding mechanisms	- Strengthen institutional capacity through facilitating and initiating national coordination mechanisms - Develop and disseminate comprehensive knowledge tools and resources - Bridge the gap between policy planning and implementation - Institutionalize cross-sectoral collaboration for long-term sustainability and facilitate structured frameworks for the ongoing implementation of the Kigali Amendment objectives

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
3. Key activities	- Organized two-day twinning workshops - Facilitated knowledge exchange on policy frameworks - Introducing stakeholders to financial mechanisms - Shared best practices across regions - Explored strategies to maximize the climate benefits of refrigerant transitions - Provided a platform for networking between NOOs and NEEPs	- Conduct systematic regional gap analysis with dedicated regional technical experts - Develop up to five comprehensive toolkits (e.g., Policy Integration, Market Surveillance, Technical Assessment) - Create National Coordination Mechanisms Toolkit with governance structures and memorandum of understanding (MOU) templates - Map institutional frameworks. - Facilitate and initiate the formation of permanent national coordination bodies - Following the development of toolkits and resources, regional twinning Workshops will be organized across the nine networks to introduce key knowledge tools, provide hands-on training, facilitate National Coordination Mechanisms formation, and foster regional cooperation
4. Stakeholder engagement	- Engaged NOOs, NEEPs, and FMFPs - Uneven FMFP participation across regions - Mixed levels of prior interaction between stakeholders - Many participants from the same countries had never met before the workshops	- Focus primarily on NOOs and NEEPs (most engaged stakeholder groups) - More strategic approach to stakeholder selection based on phase I findings - Inclusion of regional technical experts throughout the project lifecycle - Targeted engagement with regional energy efficiency organizations - Emphasis on building formal institutional linkages beyond individual participation
5. Knowledge resources and tools	- Limited standardized existing tools identified - Primary focus on awareness raising and knowledge sharing - Information shared during workshops but few standardized resources and/ or documented - Identified need for region-specific and language-appropriate materials	Development of comprehensive toolkits such as: - National Coordination Mechanisms Toolkit - Refrigerant Integration Guidelines - Market Surveillance Toolkit - Technical Assessment Toolkit - Policy Integration Toolkit - End-User Awareness resources - Customized resources in multi-languages - Leveraging existing knowledge resources
6. Institutional coordination	Identified fragmentation of responsibilities among ministries as a barrier	Systematic assessment of existing coordination mechanisms

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
	- Highlighted successful models like Niger's approach of including energy efficiency authorities in ozone committees - Limited formal mechanisms to sustain coordination beyond workshops	- Development of a dedicated "National Coordination Mechanisms Toolkit" with templates for MOUs between agencies - Governance structures and operational guidelines for cross-sectoral bodies - Formalization of inter-ministerial committees - Clear role definitions for different stakeholders
7. Technical focus areas	- General awareness of energy efficiency and refrigerant transition - Limited specific guidance on technical implementation - Introduction to concepts like MEPS and energy labelling - Identified the need for technician training on energy efficiency	- Specific focus on integrating refrigerant type, quantity, and GWP into MEPS - Detailed protocols for product testing and market audits - Standardized testing protocols based on global standards - Integration of energy efficiency competencies into technician certification - Clear guidelines for market surveillance and compliance verification - Templates for documenting evaluation results and simplifying reporting
8. Regional customization	- Limited regionally tailored approaches - Identified unique regional challenges	- Systematic regional gap analysis to identify specific needs - Customization of the knowledge tools to regional contexts - Translation into relevant regional languages - Development of region-specific case studies - Consideration of unique constraints like testing facility availability
9. Implementation structure	- Single-component approach primarily focused on workshops - Limited pre-workshop needs assessment	- A total implementation timeframe of 30 months, along with systematic follow-up and impact assessment. - Three-component structure: 1. Preparation & Assessment (5 months) 2. Knowledge Development (7 months) 3. Workshops (18 months)
10. Market surveillance	- Identified enforcement challenges for MEPS and labeling - Limited practical guidance on implementation	- Comprehensive "Market Surveillance Toolkit" - Verification guidelines for assessing energy performance - Enforcement frameworks with penalties and consumer protection - Protocols for product testing and market audits - Focus on residential applications (room ACs, household refrigerators)

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
11. Resource allocation	- Resources primarily directed toward workshop organization, logistics and participation - Limited investment in knowledge tool development	- To ensure a more effective and sustainable approach, the project emphasizes a balanced allocation of resources through: - A strategic distribution of regional experts, knowledge resources, and workshops, fostering stronger local engagement and ownership, and the resources will be made across core components of the project, including assessment, tool development, and capacity-building workshops, to maximize impact and ensure coherence throughout the implementation process; and - A particular focus will be placed on engaging and supporting regional technical experts across the entire project lifecycle, recognizing their vital role in tailoring solutions to local contexts.
12. Performance measurement	- Limited structured performance framework - Focus on workshop completion and participation	Comprehensive performance indicators across all components with specific measurable targets and sustainability dimensions.
13. Linkage with other related energy efficiency projects and initiatives	- Limited explicit connection to other energy efficiency projects - Some references to KIPs and HCFC phase-out management plans (HPMPs)	- Systematic mapping of ongoing energy efficiency projects (Decisions 89/6, 91/65, 94/60) - Leveraging lessons from these projects in knowledge resources - Using workshops for experience sharing from energy efficiency projects - Collaboration with existing regional energy efficiency organizations - Strengthened partnership with UNEP's U4E initiative
14. Sustainability approach	- Limited formal mechanisms for continuing collaboration - Primarily focused on workshop activities	- Facilitate and initiate national coordination mechanisms - South-South cooperation networks - Formalized strategic partnerships with an online platform for ongoing resource access



**AMENDMENT TO
UNEP'S WORK PROGRAMME
2025**

**Presented to the
96th Meeting of the Executive Committee
of the Multilateral Fund for the Implementation
of the Montreal Protocol**

March 2025

United Nations Environment Programme

A. INTRODUCTION

1. UNEP's Work Programme 2024 was approved at the 95th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol.

2. This document, as submitted for consideration to the 96th Meeting of the Executive Committee, represents an Amendment to that Work Programme.

B. SUMMARY OF THE WORK PROGRAMME AMENDMENT FOR 2025

3. Consistent with the Business Plan 2025-2027, this Amendment comprises funding requests for

- Support for the implementation of Institutional Strengthening projects in **4** countries.
- Support in preparation of HCFC phase-out Management Plans (Stage 3) in **2** countries.
- Support in preparation of national inventories of banks of waste-controlled substances and national action plan in **11** countries
- Support in preparation of Verification reports in **8** countries.
- Support for Enabling Activities for Kigali Amendment in **1** country.
- Support for Additional emergency assistance for institutional strengthening in **1** country.
- Support for the implementation of **1** global project.

4. Details of the Work Programme Amendment and the total requested funding by project groups are presented in Table 1.

5. Summary of the Work Programme Amendment is presented in Table 2.

Table 1. Funding requests for annual tranches for ISP renewals and individual projects to be considered at the 96th Meeting of the Executive Committee

Country	Project title	Amount, US\$	PSC, US\$	Total requested amount, US\$
INSTITUTIONAL STRENGTHENING PROJECT RENEWALS (ISRs)				
Angola	Extension of the institutional strengthening project (phase VIII)	356,106	0	356,106
El Salvador	Extension of the institutional strengthening project (phase VII)	180,000	0	180,000
Ethiopia	Extension of the institutional strengthening project (phase X)	180,000	0	180,000
Namibia	Extension of the institutional strengthening project (phase XII)	180,000	0	180,000
Sub-total for Institutional Strengthening Projects		896,106	0	896,106
PREPARATION OF HCFC PHASE-OUT MANAGEMENT PLANS (STAGE 3)				
Iraq	Preparation of HCFC Phase-out Management Plan (HPMP) Stage III - the lead agency	60,000	7,800	67,800
Kuwait	Preparation of HCFC Phase-out Management Plan (HPMP) Stage III - the lead agency	70,000	9,100	79,100
Sub-total for Preparation of HCFC phase-out Management Plans (Stage 3)		130,000	16,900	146,900
PREPARATION OF NATIONAL INVENTORIES OF BANKS OF WASTE-CONTROLLED SUBSTANCES AND NATIONAL ACTION PLAN				
Barbados	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Dominica	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	70,000	9,100	79,100
Ethiopia	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Georgia	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Ghana	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	90,000	11,700	101,700

Iraq	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	100,000	13,000	113,000
Oman	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	90,000	11,700	101,700
Rwanda	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Sant Kitts and Nevis	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	70,000	9,100	79,100
Suriname	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Tanzania	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Sub-total for Preparation of national inventories of banks of waste-controlled substances and national action plan		900,000	117,000	1,017,000
TECHNICAL ASSISTANCE TO PREPARE A VERIFICATION REPORT ON HCFC CONSUMPTION				
Antigua and Barbuda	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Belize	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Bhutan	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Burundi	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Congo (the)	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Saint Lucia	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Suriname	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Zimbabwe	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Sub-total for Preparation of Verification reports		240,000	31,200	271,200
ENABLING ACTIVITIES FOR KIGALI AMENDMENT				
Central African Republic	Enabling activities for Kigali Amendment	150,000	10,500	160,500
Sub-total for Preparation of Enabling Activities		150,000	10,500	160,500
ADDITIONAL EMERGENCY ASSISTANCE FOR INSTITUTIONAL STRENGTHENING				
Maldives	Additional emergency assistance for institutional strengthening	30,000	0	30,000
Sub-total for Additional emergency assistance for institutional strengthening		30,000	0	30,000
GLOBAL PROJECT SUBMISSION				
Global	Twinning of Ozone Officers and National Energy Efficiency Policymakers to Support Kigali Amendment Objectives (Phase II)	793,200	97,252	890,452
Sub-total for the global project submission		793,200	97,252	890,452

 Table 2. Summary of items submitted for consideration by the 96th Executive Committee meeting by group

Type of projects	Value in US\$	Project support costs in US\$	Total in US\$
Sub-total for Institutional Strengthening Projects	896,106	0	896,106
Sub-total for Preparation of HCFC phase-out Management Plans (Stage 3)	130,000	16,900	146,900
Sub-total for Preparation of national inventories of banks of waste-controlled substances and national action plan	900,000	117,000	1,017,000
Sub-total for Preparation of Verification reports	240,000	31,200	271,200

Sub-total for Enabling Activities	150,000	10,500	160,500
Sub-total for Additional emergency assistance for institutional strengthening	30,000	0	30,000
Sub-total for the individual global project submission	793,200	97,252	890,452
Grand Total	3,139,306	272,852	3,412,158

C. PROJECT CONCEPTS for items to be submitted by UNEP

Title:	<i>Requests for institutional strengthening renewals for (4 countries) (Angola, El Salvador, Ethiopia and Namibia)</i>		
Background:	Renewals of institutional strengthening projects (ISP) for the above-listed twenty countries are being requested in line with relevant decisions and guidelines of the Executive Committee. These projects have been included in the UNEP's 2025-2027 Business Plan.		
Objectives:	To assist the Governments of these Article 5 countries in building and strengthening their capacity for the implementation of the Montreal Protocol and its Amendments.		
Activities and description:	Individual documents for these projects – the terminal reports and the action plans - have been submitted to the Multilateral Fund Secretariat separately.		
Time Frame:	36 months		
Per country cost:	Country	US\$	
	Angola	356,106	
	El Salvador	180,000	
	Ethiopia	180,000	
	Namibia	180,000	
	Total	896,106 (USD)	

*Note: No project support costs are requested for institutional strengthening projects.

Enabling Activities for Kigali Amendment
As per Executive Committee decision 79/46

Date

Mach, 2025

Services Performed For:

Country: Central African Republic

Local Executing Authority: Ministère de l'Environnement et du Développement Durable (MEDD)



Funding Request for Enabling Activities for Kigali Amendment in Central African Republic

Background

The Government of Central African Republic has decided to take steps to address HFCs, herewith submitting a proposal for activities to facilitate ratification of the Kigali amendment and related development of a licensing system, as well as capacity building related activities for adopting alternatives to HFCs.

The country is in the process of negotiations to initiate the ratification process and their goal is to finalize ratification by December 2025, with the support of the Enabling Activities project and provided that political conditions and national stability allow.

Based on the decision of the Executive Committee 79/46, Central African Republic is proposing Enabling Activities for HFC Phase-down for the funding amount of US\$ 150,000 with UNEP as a sole implementing agency.

Institutional Arrangements for Implementation of Enabling Activities

Implementation of the enabling activities will be accomplished using the existing national infrastructure and institutional setting already established for ODS phase-out activities. Institutional arrangement in Central African Republic is such that management of ozone depleting substances and some climate change related projects are executed by the same office, which will facilitate the streamlining of activities.

The proposed project components will be implemented through the NOU, which is operating under the Ministère de l'Environnement et du Développement Durable (MEDD). The head of NOU is directly reporting to the Deputy Minister. Other relevant stakeholders will be involved in the discussion on the Kigali amendment ratification process through the already established National Ozone Committee, which has representatives from: Ministry of Environment, Ministry of Trade, Customs and Taxation Authority, Importers of refrigeration and air-conditioning equipment, Refrigeration servicing entities, Association for Refrigeration and Air-conditioning Technicians; and other government agencies. Several targeted meetings will be organized with the private sectors including hotel and restaurants, servicing sectors and Vocational Training Centres which are regularly involved to provide training in the refrigeration sector and with the Customs Services Department for assisting in development of licensing and quota system for HFCs.

Components Proposed for Enabling Activities

Proposed Component 1:	Facilitation of Ratification of the Kigali Amendment
Objective	To achieve a broader understanding of the Kigali amendment provisions and to prepare legislative bases for its implementation
Target Group:	High-level decision makers, relevant governmental institutions, private companies and servicing technicians in the sectors that are using HFCs
Description of activities	1. Analysis of existing Ozone and Climate Policy and Legislation and drafting the amendments in the existing legislation to extend the control measures to HFCs following the ratification of the Kigali amendment (HFC phase-down schedule, licensing requirements, HFC reporting requirements). 2. Stakeholder consultations to facilitate the ratification process at the national level: Organization of four consultative meetings with stake holders. 3. Translation of the Kigali amendment into national language 4. Drafting the Law on ratification of the Kigali amendment with the justification document, as required by the national legislative process 5. Production of information sheets on the Kigali amendment 6. Finalizing the package on the ratification of Kigali amendment and advancing the ratification process. The ultimate target of this component is ratification of the Kigali amendment. The ratification process itself is done outside of the mandate of the NOU, and the NOU doesn't have direct influence on the timing of the process. For that reason, the NOU will consider this component finalized when all necessary documents and legal changes (Law on ratification of the Kigali amendment and updated existing ODS legislation) are ready and the process of adoption is advanced.
Outputs	a) Draft document for analyzed/revised existing Ozone and Climate Policy and Legislation in place. b) At least 3 stakeholder consultative meetings during the legislation drafting process. c) Official National language Kigali amendment translated document in place. d) Ratification documents to national legislation prepared and submitted e) Awareness materials on HFC phase down produced f) Final package on the ratification of Kigali amendment in place.

Proposed Component 2:	Capacity-Building & Training on Alternatives
Objective	To understand the training needs in the servicing sector that would allow for HFC phase-down
Target Group:	Private companies and servicing technicians in the sectors that are using HFCs including Technical Training Institutes in RAC sectors
Description of activities	1. Undertaking the training needs assessment for the servicing sector and preparing an assessment report that will be used for further planning of the activities related to use of HFCs and low-GWP alternatives. For these activities, hiring a national and international consultant with good understanding of the issues will be needed and for that, consultative meetings, elaboration of terms of reference and interviews with the technicians should be done. 2. Conduct sensitization meetings for technicians on safe handling of HFCs and its alternatives. It is important to keep on updating technicians with new technologies and refrigerants gases into the market.
Outputs	a) Training Needs for RAC sector identified b) At least 4 sensitization meetings on identification and safe handling of HFCs and its Alternatives conducted.

Proposed Component 3:	Article 4B Licensing and Reporting
Objective	To develop a required regulatory package for HFC import/export licensing system
Target Group:	National Customs Service and importers/exporters of HFCs and HFC containing equipment
Description of activities	1. Revise the existing National Ozone Depleting Substances Legislation (and ODS based equipment) and drafting the ODS alternative regulation to allow import/export licensing control measures for HFCs for the implementation of the Kigali Amendment (HFC phase-down schedule, licensing requirements, HFC reporting requirements). 2. Assisting Customs Office in developing national custom codes for different HFCs and include them into the Customs Tariff in order to ensure proper monitoring and recording of imports/exports or re-export of individual HFCs. Assist the Customs Department to develop country-specific national HS Codes for HFCs to facilitate proper monitoring and recording of imports/exports of individual HFCs/alternatives
Outputs	a) National ODS regulation revised, b) Country-specific national HS Codes for HFCs developed

Proposed Budget

Proposed cost in (USD) without PSC	
<i>Component 1: Facilitation of ratification of the Kigali amendment</i>	<i>70,000</i>
1. Analysis of existing legislation and drafting amendments (2 national consultants x 6 months x US\$ 2,000.00)	24,000
2. Stakeholder consultations to facilitate the ratification process at the national level: Organization of four consultative meetings with stake holders.	10,000
3. Translation of the Kigali amendment into national language (1 national consultant x 2 months x US\$ 1,000.00)	2,000
4. Drafting the law on ratification of the Kigali amendment with the justification document, as required by the national legislative process (2 national consultants x 5.5 months x US\$ 2,000.00)	22,000
5. Production of information sheets on the Kigali amendment to facilitate consultations and speed up the ratification (translation of the Ozone Secretariat's briefing notes on ratification and 10 OzonAction factsheets into national language and printing 50 copies of each of the translated documents)	10,000
6. Preparing the package on the ratification of Kigali amendment (miscellaneous expenses – printing, copying, editing etc.)	2,000
<i>Component 2: Capacity-building & training on alternatives</i>	<i>50,000</i>
1. Undertaking the training needs assessment for the servicing sector and preparing an assessment report: Organization of several meetings with main refrigeration Associations and visits of several refrigeration workshops and refrigeration institutes; organization of a workshop on low emission alternatives.	20,000
2. Conduct sensitization meetings for technicians on safe handling of HFCs and its alternatives. It is important to keep on updating technicians with new technologies and refrigerants gases into the market.	30,000
<i>Component 3: Article 4B licensing and reporting</i>	<i>30,000</i>
1. Review of the national licensing system of and a proposal for how to include HFCs (1 national consultant x 3 months x US\$ 2,000.00)	6,000
2. Assisting the General Directorate of Customs and Indirect Laws in establishing national custom codes for HFCs: Organization of four workshops of 25 participants each and production awareness materials.	24,000
Total in (USD) without PSC	150,000

Implementation Plan

The project will be implemented between July 2025 – December 2026 (18 months)

Activity	Responsible Entity	Target Group	Start Date (Month/Yr .)	Date Of Completion (Month/Year)	Budget (US\$)	Milestones	Expected Outputs
Component 1: Facilitate the Ratification of the Kigali Amendment							
Analysis of existing legislation and drafting amendments	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	December 2025	24,000	Report on analyzed legislations	Provision of the document on analyzed legislations and draft amendments
Stakeholder consultations to facilitate the ratification process at the national level: Organization of four consultative meetings with stake holders.	NOU	RAC, Govt. Ministries, Customs Office	August 2025	December 2025	10,000	Meeting minutes	At least 4 stakeholder consultative meetings
Translation of the Kigali amendment into national language	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	November 2025	2,000	Reports	Provisions of the Kigali Amendment and relevant information on HFC phase down translated into the national language.
Drafting the law on ratification of the Kigali amendment with the justification document, as required by the national legislative process	NOU	Legislative Assembly	August 2025	November 2025	22,000	Reports	Ratification documents to the Legislative Assembly prepared and submitted
Production of information sheets on the Kigali amendment to facilitate consultations and speed up the ratification	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	December 2025	10,000	Awareness materials	Awareness materials on HFC phase down produced
Preparing the package on the ratification of Kigali amendment	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	December 2025	2,000	Final package on ratification of the Kigali amendment	Final package of ratification of the Kigali amendment submitted.

Activity	Responsible Entity	Target Group	Start Date (Month/Yr .)	Date Of Completion (Month/Year)	Budget (US\$)	Milestones	Expected Outputs
Component 2: Capacity Building and Awareness on HFCS and Alternatives Management							
Undertaking the training needs assessment for the servicing sector and preparing an assessment report: Organization of several meetings with main refrigeration Associations and visits of several refrigeration workshops and refrigeration institutes; organization of a workshop on low emission alternatives	NOU	RAC Sector	January 2026	December 2026	20,000	Training needs Reports	Training Needs for RAC sector identified
Conduct sensitization meetings for technicians on safe handling of HFCs and its alternatives.	NOU	RAC Sector	January 2026	December 2026	30,000	Meeting Reports	Workshop on low emission alternatives conducted
Component 3: Article 4B Licensing System and Reporting							
Revise the existing National Ozone Depleting Substances legislation (and ODS based equipment) and drafting the ODS alternative regulation to allow import/export licensing control measures for HFCs	NOU	RAC sector, Enforcement Agencies, Importers	August 2025	June 2026	6,000	Review Reports	National ODS regulation revised, Country-specific national HS Codes for HFCs developed
Assisting the General Directorate of Customs and Indirect Laws in establishing national custom codes for HFCs: Organization of four workshops of 25 participants each and production awareness materials.	NOU	General Directorate of Customs	January 2026	July 2026	24,000	Reports	Country-specific national HS Codes for HFCs developed

Statement by the Government and Implementing Agency

The Government of Central African Republic and UNEP confirmed that the proposed enabling activities will not delay the implementation of HCFC phase-out activities in the country. HPMP stage 2 preparation request is planned to be submitted for consideration of ExCom-97

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
HPMP PROJECT PREPARATION REQUEST FORM
HCFC PHASE-OUT MANAGEMENT PLAN (OVERARCHING STRATEGY)**

Part I: Project Information

Project title:	Stage 3 - HCFC Phase-out Management Plan (preparation)	
Country:	Republic of Iraq	
Lead implementing agency:	UNEP	
Implementation period:	July 2025- December 2026	
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNEP	Overarching	60,000 + PSC

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage II HPMP had been returned / will be returned (Decision 71/42(i))	☒	☐
Specify meeting at which PRP funding balance had been returned/will be returned	Stage II PRP funding balance was returned to the MLFS.	

A. Information required to support PRP funding (Overarching strategy)

1. Montreal Protocol compliance target to be met in ☐ stage II / ☒ stage III of the HPMP			
Phase-out commitment (%)	100	Year of commitment	2030
☒ Servicing only		☐ Manufacturing only	☐ Servicing and manufacturing
2. Brief background on previous stage of the HPMP			
Please provide a brief background on the previous stage of the HPMP, when it was approved, a brief description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.			
The Executive Committee approved at its 87th meeting in (28 June – 2 July) 2021 a request submitted by UNEP as the LA has for Stage II of the HPMP for the Iraq for the period from 2021 to 2025 to reduce HCFC consumption by 69 per cent of the country's baseline, in the amount of US \$3,026,100, consisting of US \$1,840,000, plus agency support costs of US \$212,400 for UNEP, and US \$910,000, plus agency support costs of US \$63,700 for UNIDO. The ExCom-87 also approved the first tranche of stage II of the HPMP for Iraq, and the corresponding tranche implementation plan, in the amount of US \$400,421, consisting of US \$335,000, plus agency support costs of US \$38,671 for UNEP, and US \$25,000, plus agency support costs of US \$1,750 for UNIDO. During the first tranche, the regulatory and institutional frameworks on ODS management have been assessed to identify areas for update and development in cooperation with the legal department of the Ministry of Environment and key stakeholders, and the E-Licensing has been enhanced through the implementation of several updates. Capacity building for customs officers, enforcement officers, and inspectors has been continuously conducted, with a focus on newly recruited personnel, to enhance enforcement capacities. The certification scheme for RAC technicians has been updated to include good practices and information on available alternatives for high ambient temperatures, and two workshops have been organized to promote the national certification program for RAC technicians, with additional workshops planned for the second tranche of Stage II. Additionally,			

A technical training and awareness program was organized for large end-users, building owners, consultants, and technical decision-makers at the governmental level, focusing on low-GWP alternatives to HCFCs across various applications.

A series of technical training sessions, including practical demonstrations of best practices, were conducted nationwide for RAC technicians in collaboration with the Ministry of Social Affairs. These sessions resulted in the training and certification of 450 RAC technicians.

For the investment component, UNIDO with the assistance of the NOU planned to recruit local consultants to commence the operation of the 3 reclaim centers established in Iraq including the development of a business model. Local consultants are also recruited to start the technical activities to assist large end-users of AC in the electrical industry to investigate technology candidates and their impact on their products, production and market.

UNEP submitted a verification report, prepared in 2024, for the period 2020-2023, confirming that the Government of Iraq continues to implement its licensing and quota system for HCFC imports and exports. The report also confirmed that the total consumption of HCFCs for 2020-2023 was consistent with the figures reported under Article 7 of the Montreal Protocol. The verification concluded that Iraq is in compliance with the maximum allowable consumption levels established in its Agreement with the Executive Committee. The reported HCFC consumption during 2020-2023 remained stable at 66.39 ODP T.

The request for the second and third tranches of HPMP Stage II was submitted to the ExCom-95 meeting in December 2024. Since UNIDO has not yet completed Stage I of the HPMP and the projects IRQ/REF/57/INV/07 and IRQ/PHA/58/INV/09, the ExCom-95 decided, on an exceptional basis and with the understanding that no further extensions would be approved, to extend the completion dates for the projects implemented by UNIDO until 31 December 2025.

Additionally, the ExCom-95 approved only the second tranche of the HPMP for Iraq, along with the corresponding 2024-2026 tranche implementation plan, in the amount of US \$585,000, plus agency support costs of US \$67,529 for UNEP, on the condition that no further funding would be considered for UNIDO until the conditions established in decision 87/40(c) had been fulfilled.

From January 2025 to June 2026, planned activities under the second tranche will focus on strengthening policy and regulatory enforcement, enhancing technical training and certification, and ensuring effective project implementation and monitoring. To bolster enforcement, continuous training for customs officers and specialized seminars for key authorities will be conducted, complemented by a national awareness program promoting certification. Technical skills will be advanced through curriculum updates addressing zero ODP/low GWP refrigerants, expansion of certification programs for RAC technicians, and specialized training for large end-users and government decision-makers on HCFC alternatives. A comprehensive training program on good servicing practices, including low-GWP alternatives, will also be implemented across all governorates. Finally, project implementation and monitoring will be maintained for all investment and non-investment components of the program. These efforts aim to support the continued phase-out of HCFCs and promote the adoption of low-GWP alternatives.

3. Current progress in implementation of previous stage of the HPMP

Activity	Description	Implementing agency
Legal/regulatory framework	See above	UNEP
Refrigeration servicing sector	See above	UNEP
Reclamation centers	See above	UNIDO

4. Overview of current HCFC consumption in metric tonnes by substance (last three years)

Substance	Sector	2021	2022	2023
HCFC-22	Manufacturing-AC	64	64	64
HCFC-22	RAC servicing	1141	1134	1134
HCFC-22	Total	1,205	1,198	1,198

5. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HCFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)

Iraq does not produce any HCFCs and has imported only HCFC-22 over the past three years. In 2023, Iraq imported 1,207 MT (66.39 ODPT) of HCFC-22, while the actual consumption was 1,198 MT (65.89 ODPT). The slight difference between imports and consumption is attributed to some importers stockpiling small quantities. The volume of HCFC-22 imports remained constant at 1,207 MT from 2021 to 2023, as Iraq has implemented a licensing and quota system for HCFC imports to ensure compliance with allowable consumption limits.

HCFC-22 is primarily used in the RAC servicing sector, as well as in the manufacturing, assembly, and installation sectors for RAC equipment. The continued demand expected for servicing the aging population of residential and commercial air-conditioning equipment will be met by enhanced enforcement of the good practices and refrigerants management including the RRR scheme in addition to the diminishing consumption of the manufacturing sector due their voluntary conversion to available non ODS alternatives. The only manufacturing enterprise consuming R-22 is planning to convert in 2025 to any available HFC-based technology noting the current lack of feasible low-GWP alternatives suitable for high-ambient temperature countries. Hence, the NOU plans to cover the manufacturing sector through future KIP which is expected during the coming year after finalizing the ratification process.

6. Description of information that needs to be gathered and updated. Explain why this has not been undertaken during preparation for the previous stage of the HPMP.

Information needed	Description	Agency
Updated data on HCFC consumption in manufacturing/servicing sector	Conduct surveys to collect information on the HCFC quantities currently consumed by sector.	UNEP
Updated sectoral consumption information	Update the inventory of HCFC-based equipment especially air conditioners and commercial HCFC-based equipment.	UNEP
Others, specify. Stakeholders consultations	Identify and discuss with the relevant stakeholders, possible ways of reducing the current consumption of HCFCs in the country. Taking into account the limitations with alternatives suitable for Iraq.	UNEP
Others, specify. Market profile of HCFC and alternatives-based equipment	Determine the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies which are ozone friendly and incorporate results of the survey into the HPMP stage 3.	UNEP
New information on ODS regulations	Analysis of the current regulatory and institutional frame work including the enforcement mechanism and capacity.	UNEP
Project preparation for an additional reclamation center	The project will assess the location and equipment needed to establish an additional reclamation center and laboratory for quality assurance and control of reclaimed refrigerants.	UNEP

7. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US \$)	Agency
Project preparation for an additional reclamation center with a laboratory set up for quality assurance and control of reclaimed refrigerants.	8,000	UNEP
Updated data on HCFC in consuming sectors; and inventory of HCFC based equipment	25,000	UNEP
Identify the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies	10,000	UNEP
Stakeholders consultations and development of HPMP Stage III project document	17,000	UNEP
TOTAL	60,000	

8. How will activities related to implementation of the Kigali Amendment to phase down HFCs be considered during project preparation for stage III of the HPMP?

The overarching strategy for Iraq is to implement an integrated plan for reducing HCFC in the manufacturing and servicing sectors by promoting and adopting energy-efficiency alternative technologies to achieve climate benefits. It will include the operationalization of the R&R&R scheme and the enforcement of the RAC certification scheme for enhanced management of refrigerants. The strategy will focus on updating the existing policies, strengthening their implementation, and developing the capacity of refrigeration experts and practitioners to support the adoption of appropriate ozone and climate friendly alternative technologies. The Government of Iraq is committed, to the extent possible, to phasing out remaining HCFC consumption while increasing the use of low-GWP alternatives.

9. How will the Multilateral Fund gender policy be considered during project preparation?

In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the stage III prep.

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
HPMP PROJECT PREPARATION REQUEST FORM
HCFC PHASE-OUT MANAGEMENT PLAN (OVERARCHING STRATEGY)**

Part I: Project Information

Project title:	Stage 3 - HCFC Phase-out Management Plan (preparation)	
Country:	State of Kuwait	
Lead implementing agency:	UNEP	
Implementation period:	July 2025-December 2026	
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNEP	Overarching	70,000 + PSC

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage II HPMP had been returned / will be returned (Decision 71/42(i))	☒	☐
Specify meeting at which PRP funding balance had been returned/will be returned	Stage II PRP funding balance was returned to the MLFS.	

A. Information required to support PRP funding (Overarching strategy)

1. Montreal Protocol compliance target to be met in ☐ stage II / ☒ stage III of the HPMP			
Phase-out commitment (%)	100%	Year of commitment	2030
☒ Servicing only		☐ Manufacturing only	☐ Servicing and manufacturing
2. Brief background on previous stage of the HPMP			
Please provide a brief background on the previous stage of the HPMP, when it was approved, a brief description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.			
Stage II of the HPMP for Kuwait was approved at the ExCom-88th meeting in (15– 19) November 2021 to meet the 67.5 per cent reduction from the baseline by 2025, at a total cost of US \$2,816,612, consisting of US \$1,952,800, plus agency support costs of US \$224,808 for UNEP, and US \$597,200, plus agency support costs of US \$41,804 for UNIDO. Stage II consists of three tranches that cover policy and legislation, customs training, training and certification of RAC servicing technicians, promotion of alternative technologies, development of standards and SOPs, public awareness through media campaigns, conferences, workshops, stakeholders consultation, publications, information dissemination and providing technical assistance and monitoring of the proceedings. Also, the ExCom-88 approved the first tranche of Stage II of the HPMP for Kuwait, and the corresponding tranche implementation plan, in the amount of US \$1,015,140, consisting of US \$670,840, plus agency support costs of US \$77,228 for UNEP, and US \$249,600, plus agency support costs of US \$17,472 for UNIDO. For policy and enforcement, the national ODS Legislation has been updated by adopting the 2022 HS code and enhancing the process for licensing and controlling ODSs, and enforcement has been strengthened through the organization of awareness campaign for government authorities and relevant stakeholders.			

The capacities of customs and enforcement trainers and officers have been enhanced in combating illegal trade and the safe handling of hazardous refrigerants by training 8 trainers and building the capacities of more than 500 customs officers on the Montreal Protocol and HCFC control, including risk profiling.

The training curriculum for RAC technician, training syllabus of vocational education and training institutes has been updated to include newly long-term ODS alternatives and related safety and technical aspects.

The certification of RAC technicians is now mandatory and will be implemented as soon as all the frameworks are finalized including the adoption of the Recognition of Prior Learning (RPL). The assessors will be trained to implement the assessment scheme including the adoption of the RPL. Relative to certification of technicians, a comprehensive database for various servicing workshops was developed and established containing the details of the workshops. The NOU worked with the Ministry of Municipalities in implementing the issuance of business permits to the registered workshops.

Additionally, and to build the capacities of RAC servicing sector, the capacities of 25 trainers have been enhanced and 237 technicians have been trained on best practices and technical aspects.

The initial mapping of schools and centers to receive the necessary tools and equipment align with the new training curriculum has been finalized, and required equipment/ tools number have been discussed as to meet the actual needs. The selected training centers will also be established as training centers of RAC technicians on the operation, maintenance of RR and R. This will be implemented during the stage 3 implementation. The reclamation center has been established and currently in operation at the United Factory for Compressors and Refrigerants (UFCR). The development of guidelines for reclamation facilities and business model has been initially discussed with concerned stakeholders. The feasibility study report on the final disposal of unwanted refrigerants was finalized and recommendations being considered by the respective authorities for adoption to enhance the life cycle management of refrigerants.

Technical assistance in cooperation with KISR has been provided to big end-users to support the efforts in assessing leaks and proposing required improvements to reduce leak rates to acceptable levels and promote better practices and improved the management of refrigerants on-site. The NOU also coordinated with KISR to conduct the research on safety and performance of low GWP technologies. Multiple meetings have been held resulting to the process of signing of the MOU in November 2024. Various awareness-raising have been conducted to different associations, consultative and roundtable meetings, and celebrations of International Ozone Day and World Refrigeration Day.

The Executive Committee approved at its 95th meeting in (4– 8) December 2024 the Second Tranche of the HPMP Stage II for Kuwait and the corresponding tranche implementation plan in the amount of US \$1,437,974, consisting of US \$1,013,560, plus agency support costs of US \$116,682 for UNEP, and US \$287,600, plus agency support costs of US \$20,132 for UNIDO.

Under the second tranche, between January 2025 and June 2026, planned activities will focus on strengthening regulations and enforcement, enhancing technical skills, promoting alternative technologies, and developing national standards related to ozone-depleting substances. Key initiatives include ongoing awareness campaigns for government and stakeholders, improvements to the e-licensing and monitoring system, and the development of an e-registration system for servicing workshops. Customs and enforcement officer training will continue, with a focus on risk profiling and support beyond customs checkpoints. Technician training and certification will be expanded through updated syllabi, teacher and assessor training, provision of equipment, and a Recognition of Prior Learning (RPL) campaign. Efforts to promote alternative technologies will include information dissemination, technical assistance to end-users, and public awareness campaigns. National standards for ODS sectors will be updated to align with international standards, and project management, monitoring, and verification will continue through the Project Management Unit (PMU).

3. Current progress in implementation of previous stage of the HPMP

Activity	Description	Implementing agency
Legal/regulatory framework	See above	UNEP
Refrigeration servicing sector	See above	UNEP
National Recovery, Recycling and Reclaim Centers	See above	UNIDO

4. Overview of current HCFC consumption in metric tonnes by substance (last three years)				
Substance	Sector	2021	2022	2023
HCFC-22	RAC servicing	3,146.80	2800.85	2,672
HCFC-123	RAC servicing	3.59	0.00	3.46
HCFC-141b	Manufacturing-Foam PU	360.00	241.20	0.00
HCFC-142b	Manufacturing-Foam XPS	180.00	0.00	0.00
HCFC-141b	Pre-blended polyols	235.00	190.00	180.00
5. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HCFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)				
In the servicing sector, the demand for HCFC-22 from 2021 to 2023 has decreased due to the operation of reclamation centers in Kuwait, while the demand for HCFC-123 has been almost negligible. The demand for HCFC-141b dropped from 360 mt in 2021 to zero in 2023 due to the conversion of two large PU foam manufacturers. Similarly, in the XPS manufacturing sector, it is clear that the demand for HCFC-142b has fallen to zero in the past two years. While the use of HCFC 141b in Pre-blended polyols has slightly decreased over the past three years.				
6. Description of information that needs to be gathered and updated. Explain why this has not been undertaken during preparation for the previous stage of the HPMP.				
Information needed	Description			Agency
Updated data on HCFC consumption in manufacturing/servicing sector	Conduct surveys to collect information on the HCFC quantities currently consumed by sector.			UNEP
Updated sectoral consumption information	Update the inventory of HCFC-based equipment especially air conditioners and commercial HCFC-based equipment.			UNEP
Others, specify. Stakeholders consultations	Identify and discuss with the relevant stakeholders, possible ways of reducing the current consumption of HCFCs in the country. Taking into account the limitations with alternatives suitable for Kuwait.			UNEP
Others, specify. Market profile of HCFC and alternatives-based equipment	Determine the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies which are ozone friendly and incorporate results of the survey into the HPMP stage 3.			UNEP
New information on ODS regulations	Analysis of the current regulatory and institutional frame work including the enforcement mechanism and capacity.			UNEP
Project preparation for an additional reclamation center	The project will assess the requirements to establish an additional reclamation center and laboratory for quality assurance and control of reclaimed refrigerants.			UNEP
7. Activities to be undertaken for project preparation and funding				
Activity	Indicative funding (US \$)			Agency
Project preparation for an additional reclamation center with a laboratory set up for quality assurance and control of reclaimed refrigerants	10,000			UNEP
Updated data on HCFC in consuming sectors; and inventory of HCFC based equipment	25,000			UNEP
Identify the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies	15,000			UNEP

Stakeholders consultations and development of HPMP Stage III project document	20,000	UNEP
TOTAL	70,000	
8. How will activities related to implementation of the Kigali Amendment to phase down HFCs be considered during project preparation for stage III of the HPMP?		
The overarching strategy for Kuwait is to implement an integrated plan for HCFC reductions in the manufacturing and servicing sectors through promotion and adoption of energy efficiency alternative technologies to achieve climate benefits and operationalization of the R&R&R scheme and enforcement of the RAC certification scheme for enhanced management of refrigerants. The strategy will focus on updating existing policies, strengthening their implementation, and developing the capacity of refrigeration experts and practitioners to support the adoption of appropriate ozone and climate friendly alternative technologies; these activities, under preparation for HPMP Stage III, will complement those being developed for the KIP, as the country, having ratified the Kigali Amendment, is expected to request KIP PRP soon. The Government of The State of Kuwait is committed, to the extent possible, to phase out remaining HCFC consumption while increasing use of low GWP alternatives.		
9. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the stage III prep.		

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES
OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A
PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH
SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING,
RECLAMATION AND COST-EFFECTIVE DESTRUCTION**

Part I: Project information

Project title:	Preparation of a national inventory of banks of waste-controlled substances and the development of a national plan for the management of these substances for Barbados	
Country:	Barbados	
Lead implementing agency:	UNEP	
Cooperating agency (1):	(select)	Click or tap here to enter text.
Cooperating agency (2):	(select)	Click or tap here to enter text.
Cooperating agency (3):	(select)	Click or tap here to enter text.
Meeting where request is being submitted	96 th Meeting	
Implementation period	July 2025- June 2027	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000	
(select)	Click or tap here to enter text.	
(select)	Click or tap here to enter text.	
(select)	Click or tap here to enter text.	

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO, please provide explanation: The NOU received an approval from the Government at later stage and the NOU was not able to request the inclusion of the request into UNEP's Business Plan at the time of its preparation.		

- A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction.**

1. Brief overview of the concept, methodology and approach to be taken for the preparation of the national inventory and/or action plan and how it is linked to other activities in the country (i.e. national plans like the KIP), in particular, those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes

Proper end-of-life management of Ozone Depleting Substances (ODS) and Hydrofluorocarbons (HFCs) is not a compliance issue under the Montreal Protocol on Substances that Deplete the Ozone Layer. Therefore, the Multilateral Fund for the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer's (MLF) scope with respect to managing ODS and HFC banks and their disposal has been limited. To date, the parties to the Montreal Protocol have agreed to only fund pilot projects specifically for the environmentally sound management of ODS banks.

Though not a compliance issue, developing countries have consistently raised the subject of the relevance of end-of-life management to sustaining compliance obligations and the impact that failure to address this complex matter has on the work of ODS and HFC Management at the national level. Developing countries, including Barbados require adequate financial support to be provided through the Montreal Protocol framework to adequately address the issues of recovery, transport, storage, and destruction of ODS and HFC stockpiles in a comprehensive and sustainable manner.

Following the entry into force of the Kigali Amendment to the Montreal Protocol on January 1, 2019 and subsequent decisions taken by the 91st meeting of the Executive Committee of the MLF for the implementation of the Montreal Protocol (ExCom91), grant funding was made accessible to Barbados to prepare a national inventory of banks of used or unwanted controlled substances and a plan for collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost effectiveness destruction.

The Government of Barbados through the Montreal Protocol on Substances that Deplete the Ozone Layer has been effectively regulating the consumption of Ozone Depleting Substances (ODS) since becoming a party to the Protocol in October 1992. To date, the Customs Act 2021 and the regulations under the Miscellaneous Controls Act Cap 329 are the umbrella legislations that established the Licensing system (LS) to control the import and export of all ODS and HFCs and have provided the basis for the hydrochlorofluorocarbon (HCFC) and HFC Quota systems.

The detailed procedures related to the Licensing system for ODS are promulgated in the Customs (List of Prohibited and Restricted Imports and Exports) Order, 2009. This piece of legislation specifies that all Montreal Protocol controlled substances with a phase-out date earlier than January 1, 2010 such as halons,

carbon tetrachloride (CTC), methyl chloroform, hydrobromofluorocarbons and bromochloromethane are banned from import and export. The subsequent 2010 amendment to the Order added Chlorofluorocarbons (CFCs) to the list of prohibited imports and exports and added HCFCs to the Restricted Imports and Exports schedules, which resulted in a requirement for a licence to trade in HCFCs. Further, an amendment to the 2010 Order in 2020, resulted in the addition of the eighteen (18) HFCs controlled under the Montreal Protocol and any mixture or derivatives thereof (i.e. HFC Blends) to the Restricted Import and Export schedules of the legislation. Consequently, a licence to import and export HFCs is also required by law before these items can be traded.

In Barbados, banks of used and unwanted controlled substances may have accumulated, and it may be possible that some of the chemicals from these banks may be escaping into the atmosphere. Any emissions that may be occurring are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol and the government continues to grapple with the issue of how to manage the challenge of recovery, storage, transportation, and disposal (i.e. recycling, reclaiming, destruction) of used or unwanted controlled substances in a constrained fiscal environment. Through the ODS and HFC Management Programme (i.e. National Ozone Unit) an effort was made to develop a management plan for Halons (i.e. Halon Management Plan 2004). In more recent years successive plans such as the Refrigerant Management Plan and the Hydrochlorofluorocarbon (HCFC) Phase out Management Plan (HPMP) only focused on encouraging the use of best practices with respect to handling, transportation and storage of refrigerants, which are the Montreal Protocol controlled substances or primary concern in Barbados currently. To this end, a guide on good practices in Refrigeration and Air Conditioning (RAC) was developed with MLF support and in-kind contributions from the MENB. However, the scope of work could not be expanded to include conducting an inventory and developing a national plan to address banks of used or unwanted controlled Montreal Protocol substances in a comprehensive way due to funding limitations.

This project aims to establish an inventory of banks of used or unwanted controlled substances in Barbados, and a plan for the collection, storage, transport and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. It will quantify the mitigation potential in line with Executive Committee (ExCom) Decision 91/66, including the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, new and/or existing legislation, protocols and/or policies that may need to be developed and/or updated respectively as well as associated costs to implement collection, storage, transport and disposal (i.e. recycling, reclamation and destruction) of used or unwanted ODS and HFCs.

The inventory of banks of used and unwanted controlled substances and the action plan will cover ODS such as Halons, CFCs, HCFCs and global warming HFCs. The inventory of existing banks and the resultant plan is expected to augment the Halon Management Plan (2004), the Barbados National Cooling Strategy for the RAC sector (2022), the HPMP (Stage I) (2013-2020) and (Stage II) (2022-2030) and the impending Kigali HFC Implementation plan (KIP) to reduce emissions through good management practices, recovery, recycling, reclamation (RRR) and proper destruction via Montreal protocol approved methods as appropriate within the country context. This project will include but not be limited to the identification of the types of chemicals that may comprise existing banks, investigation into inter alia the location of existing banks, analysis of whether adequate facilities exist to accommodate the consolidated storage of seized and contaminated waste chemicals including blends that may be stored at various government and private facilities, recommendations for needed administrative, legislative/policy and financial mechanisms to address collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction).

The outcomes of this project are expected to enhance national efforts to sustain compliance with treaty obligations and to further support the transition to the use of ozone friendly, low global warming potential (GWP) and energy efficient alternatives and related technologies in the relevant sectors in a cost effective and comprehensive manner.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Others, specify. ODS and HFC Sectoral Consumption Information	Data collection and stakeholder analysis: i) Determine data collection methodology and approach. ii) Perform a desk study on available data on ODS and HFC banks of used and unwanted controlled substances, equipment and containers relevant institutions and stakeholders, and existing regulations and policies. iii) Conduct surveys and site visits of facilities to collect and verify data and assess the condition of stockpiles. iv) Create an electronic database /inventory of banks of used or unwanted controlled substances that includes the geo-position of each bank based on data collected from on-site	UNEP

	audits/surveys and any other appropriate method. v) Create a registry for all entities that have existing banks of ODS and HFCs and a general profile of companies that may accumulate banks in the future. vi) Identify data gaps related to banks of used and unwanted controlled substances that need to be addressed in relation to inter alia relevant institutions and stakeholders, testing, record keeping, protocols, policies and regulations, storage, local and international transport for reclamation and destruction as appropriate etc.	
New information on ODS regulations	Analysis of institutional, policy and regulatory frameworks: i) Conduct a stakeholder analysis including roles and responsibilities, stakeholders e.g. RAC service centres, waste brokers, enforcement agencies, relevant Multilateral Environmental Agreement (MEA) Focal points etc. involved in waste management. ii) Analyse existing policy and regulatory frameworks, including waste management policies, hazardous waste management policies, recycling management plans, and outputs of relevant projects focused on related matters such as the GEF Islands 10279. iii) Propose recommended policies and regulations needed for supporting the collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) of used or unwanted ODS and HFCs for Barbados	UNEP
Others, specify. National Action Plan	i) Conduct stakeholder consultations presenting the draft inventory and action plan to obtain stakeholders' input, support, and validation. ii) Preparation of National Action Plan that: a. includes technical and economic analysis to compare available	UNEP

	options for handling and final disposal of unwanted controlled substances. b. Presents business/financing model options to ensure the long-term sustainability of collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) operations of used or unwanted ODS and HFCs for Barbados and proposing the best option. c. Details actions for collection, transport, storage, setting up the required disposal infrastructure (including recovery, recycling, reclamation and destruction) as well as shipping off island for destruction. d. Forecasts the amounts of used or unwanted ODS/HFC which might require RRR or disposal in the future and the estimated associated cost, to evaluate the economic viability of a reclamation and destruction plant. e. Analyses the costs and climate and ozone benefits associated with the leakage prevention, recovery, recycling, reclamation and disposal of refrigerants. f. Estimates the cost to establish a destruction facility that may be best suited for Barbados to address current and anticipated stockpiles. g. Analyses the potential for substance recycling and reclamation for reuse and perform the cost-benefit. h. Describes the existing capacity to analyse the composition of used or unwanted ODS / HFCs and make recommendations in relation to upgrading capacity. i. Proposes a recommended national protocol inclusive of supporting national mechanisms	
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	for the effective collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) of used or unwanted ODS and HFCs for Barbados j. Recommends one or more locations to facilitate the national storage of spent refrigerants and other hazardous chemicals as appropriate in order of feasibility rank and estimate the personnel, costs (facility costs, administration, monitoring etc.) associated with each. k. proposes policy and legislative actions required to be taken to implement activities identified in the plan to address collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) of used or unwanted ODS and HFCs for Barbados. l. Assesses the feasibility and provides cost estimates for disposal options (recycling, reclaiming, destruction) put forward in the document, based on expected amounts to be treated identified in the plan or projected amounts based on consumption records. iii) Finalisation of the action plan for the sound handling of unwanted Montreal Protocol controlled substances including collection, transport, and disposal of such substances and considering stakeholder comments.	
Others, specify. Project Management, Monitoring, and Reporting	Project management, monitoring, progress reporting, final report, and evaluation: i) Managing and monitoring project activities. ii) Establishing a national expert team as needed. iii) Reporting and evaluating project progress.	UNEP

	iv) Preparing initial and final reports considering stakeholder comments. v) Project progress is properly monitored and evaluated, including gender considerations.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
ODS and HFC sectoral consumption information	28,650.00	UNEP
New information on ODS regulations	10,000.00	UNEP
National Action Plan	20,000.00	UNEP
Project Management, Monitoring, and Reporting	21,350.00	UNEP
TOTAL	80,000.00	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The Fund Secretariat's operational gender mainstreaming policy will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances. The NOU will seek to encourage women to apply for consultations under the project; data on gender will be collected; images of women will be incorporated or used in any promotional material.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:	Preparation of National Inventory of Banks of Used of Unwanted Controlled Substances and National Plan	
Country:	Dominica	
Lead implementing agency:	UNEP	
Cooperating agency (1):	(select)	Click or tap here to enter text.
Cooperating agency (2):	(select)	Click or tap here to enter text.
Cooperating agency (3):	(select)	Click or tap here to enter text.
Meeting where request is being submitted	ExCom-96	
Implementation period	July 2025 – June 2027	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	70,000	
(select)	Click or tap here to enter text.	
(select)	Click or tap here to enter text.	
(select)	Click or tap here to enter text.	

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO, please provide explanation:		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1.	Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
	Dominica has been successful in the implementation of the Montreal Protocol and the phase out of consumption of HCFCs since becoming Party to the Montreal Protocol in 1993. It has regulated this through the Montreal Protocol (Substances that Deplete the Ozone Layer) Act, No. 14 of 2006 and the Montreal Protocol (Substances that Deplete the Ozone Layer) Regulations Statutory Order No. 43 of 2019. Though Dominica has not yet ratified the Kigali Amendment, which has added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances under control, the country has been collecting and reporting HFCs as part of its Country Programme (CP) and Article 7 (A7) Data.

As a result of the consumption of these controlled substances, large banks of used or unwanted controlled substances have accumulated globally and in Dominica. Emissions from these banks are continuously being released to the atmosphere. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol nor by Dominica's national regulations. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries and Dominica.

The project seeks to establish an inventory of banks of used or unwanted controlled substances in Dominica and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies and stakeholder consultation. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of unwanted ODS/HFCs. The methodology or approach can be inspired by the Climate and Ozone Protection Alliance (COPA).

The inventory of used and unwanted controlled substances and action plan will cover ODS like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and future KIP to reduce emissions through good practices, containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouse, waste and containment chemicals, blends and residues from recycling and reclaim processes.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Data collection	Determine the data collection methodology and approach along with the NOU and stakeholders. Undertake a Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Identify laboratories able to analyse the composition of used or unwanted ODS and HFCs, and the need for upgrading such laboratories. Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. Conduct further data collection, on-site visits and surveys as needed.	UNEP
Stakeholder Analysis	Conduct a stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste collectors and traders	UNEP
Analysis of data collected	Analyse the data collected, including but not limited to: the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management; existing policy and regulatory frameworks, including waste management policies; forecast the amounts of used or unwanted ODS/HFCs which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant; assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated; analyse the potential environmental benefits for the ozone layer and the climate; analyse the potential for substance recycling and reclamation for re-use; analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Preparation of inventory	Preparation of the Inventory report or National Plan:	UNEP

report/national plan	develop a database or inventory of banks of used or unwanted controlled substances; prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure; Develop a business or financing model to ensure long-term sustainability of collection or disposal operations; Conduct stakeholder consultations to present the draft National Plan to obtain stakeholder input and validation; Draft recommended regulations and policies supporting the collection and disposal of used or unwanted ODS and HFCs and sustainable financing; Finalization and endorsement of the National Plan considering stakeholder contributions.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data Collection	\$23,000	UNEP
Activity 2: Stakeholder Analysis	\$15,000	UNEP
Activity 3: Analysis of data collected	\$12,000	UNEP
Activity 4: Preparation of inventory report/National plan	\$20,000	UNEP
Click or tap here to enter text.		(select)
TOTAL	70,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom Decision 92/40 and Document 92/51 the MLF's Gender Mainstreaming Policy and Performance Indicators will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances and National Plan. In the project's implementation, females will be encouraged to apply for available positions and the NOU will use female imagery in promotional material related to the project. Female imagery will be used as much as possible, in documentation produced during the preparation phase.		

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS
OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE
COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING
CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE
DESTRUCTION**

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances	
Country:	Ethiopia	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000 plus PSC	

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO, please provide explanation:		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
The Federal Democratic Republic of Ethiopia is a party to the Montreal Protocol on Substances that deplete the ozone layer and has successfully been implementing the Protocol through the control of production and consumption of Ozone Depleting Substances. The Kigali Amendment aimed at phasing down the use of Hydrofluorocarbons (HFCs) due to their high global warming potential. The adoption of the Montreal Protocol and the Kigali Amendment which promote the use of climate friendly alternatives has resulted in the refrigeration and air conditioning sector transitioning to zero ozone depletion potential and low global warming potential technologies consistent with the provisions of the Kigali Amendment to the Montreal Protocol climate. This has ultimately led to the accumulation of banks of used or unwanted controlled

substances in Ethiopia due to the lack of proper ODS/HFC recovery, recycling, reclamation, destruction facilities and therefore the controlled substances are continuously being released to the atmosphere from these banks. The emissions from the banks are detrimental to the ozone layer, contribute to global warming and are also taken away or undoing the efforts that have been done in ozone protection and climate change mitigation. Banks of controlled substances are not regulated under the Montreal Protocol. Furthermore, collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries.

Concept: The national inventory aims to establish a comprehensive database of used or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to establish an inventory of banks of used or unwanted controlled substances in Ethiopia, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. The inventory helps identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up appropriate policy measures. They will assist in enabling the country in making an informed decision on the best cost effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs

The methodology / approach might be informed by that recommended by the Climate and Ozone Protection Alliance (COPA). **Stakeholder mapping and engagement:** Identify and involve key stakeholders from government agencies, healthcare sector, law enforcement, and the pharmaceutical industry.

Data collection and analysis: Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development: Compile the collected data into a centralized database, ensuring data integrity and security.

Gap analysis: Assess the current processes, infrastructure, and regulatory framework to identify areas for improvement.

Action plan formulation: Based on the inventory findings, develop a comprehensive action plan with specific goals, activities, responsibilities, and timelines

Align with national plans and strategies: Ensure the national inventory and action plan are integrated with broader national initiatives, such as the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector: Examine the recovery, recycling, and reclamation programs for refrigerants, as they may involve the handling of controlled substances.

Promote cross-sectoral coordination: Foster collaboration between the agencies responsible for controlled substances management, environmental protection, and the refrigeration servicing sector.

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the

HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. The UNIDO investment component of the HPMP II aims to establish refrigerant recovery, recycling and reclaim infrastructures in Ethiopia. By conducting the national inventory of banks of used or unwanted controlled substances it will assist informing how the infrastructure should be placed according to the heat spots of the banks of the controlled substances. The inventory data sources will include seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes and end-of-life appliances.

In preparation for transportation, there is possibility of collaborating with the Stockholm convention within Ethiopian Environment Protection Authority (EPA), to utilize the temporary storage site to store and package the collected substances. This centralised storage mechanism will facilitate for efficient transportation.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	• Agreeing with project team on data collection methodology and approach. • Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. • Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. • Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. • Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	• Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. • Analysing existing policy and regulatory frameworks, including waste management policies. • Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively. • Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated.	UNEP

	- Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use. - Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	- Managing and monitoring project activities. - Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	35000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15000	UNEP
Activity 3: Inventory of banks and preparation of action plan	15000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15000	UNEP
TOTAL	80000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		

The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed to support gender equality by enhancing women's access to leadership opportunities, and safe working environments. Monitoring and evaluation frameworks will include gender-specific indicators to assess the impact of project activities on gender inclusivity and make necessary adjustments.

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances
Country:	Georgia
Implementing agency:	UNEP
Meeting where request is being submitted	ExCom 96
Implementation period	24 months
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): July 2025 – June 2027	
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	80,000 plus PSC

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO , please provide explanation:		

A. Information required for the funding request to prepare a national inventory of banks of used or unwanted controlled substances, and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
The Montreal Protocol has been effectively regulating the production and consumption of ozone-depleting substances (ODS) since 1989. The Kigali Amendment added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances. Large banks of used and unwanted controlled substances have accumulated globally, which are continuously being released to the atmosphere from these banks. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries. The project aims to establish an inventory of banks of used or unwanted controlled substances in Georgia, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs.

The methodology / approach might be inspired by that recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and the future KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	Agreeing with project team on data collection methodology and approach Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. Identifying laboratories able to analyse the composition of used or unwanted ODS / HFCs, and the need for upgrading such laboratories. Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders. Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. Analysing existing policy and regulatory frameworks, including waste management policies. Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant. Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. Analysing the potential environmental benefits for the ozone layer and the climate. Analysing the potential for substance recycling and reclamation for re-use.	UNEP

	Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	Setting up database / inventory of banks of used or unwanted controlled substances. Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	Managing and monitoring project activities. Establishing national expert team. Reporting and evaluating project progress. Preparing initial and final report considering stakeholder comments. Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	24,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	20,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	20,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	16,000	UNEP
TOTAL	80,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances	
Country:	Ghana	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	90,000 plus PSC	

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: The Government of Ghana had initially requested this project to be submitted to the last Executive Committee meeting of 2024. However, due to the late timing of the request, UNEP was unable to proceed with the submission within that cycle. As a result, and in agreement with the government, the project is now being submitted in 2025. The NOU received an approval from the Government for new submission date e.g. ExCom-96 at later stage and the NOU was not able to request the inclusion of the request into UNEP's Business Plan at the time of its preparation.		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
Background: Cooling is an indispensable service in Ghana's development. The country's RAC sector which offers cooling services has grown steadily in the last years propelled by nationwide electricity coverage, rapid urbanization, population growth, expanding middle class and rising incomes. This has also increased the sector's contribution to the national GHG emissions from both direct and indirect sources and with a resultant end of life of equipment increasing without the appropriate management options.

Ghana is a party to the Montreal Protocol on Substances that deplete the ozone layer, all its subsequent amendments and in particular the Kigali amendment to the Montreal Protocol and has successfully been implementing the Protocol through the control of production and consumption of Ozone Depleting Substances and initiated controls for HFCs under the Kigali Amendments due to their high global warming potentials. The Montreal Protocol and the Kigali Amendment eventually, are promoting the use of climate friendly alternatives in the refrigeration and air conditioning sectors transitioning to zero ozone depletion potential and low global warming potential technologies.

In Ghana, the implementation of MEPS and the phase out scenarios under the protocol has ultimately resulted in the accumulation of banks of used or unwanted controlled substances and equipment and resulted in some minimal collection and dismantling of old appliances particularly refrigerators. This however, has not been adequate as there are a lot more of these end-of-life equipment's in the country that are not collected and numbers unknown. With only a potential infrastructure for the management of refrigerants and foams which is still not on stream and currently no trained dismantling facilities, this creates a big challenge for the complete management of banks in the country. Therefore, the lack of proper ODS/HFC recovery, recycling, reclamation, destruction facilities with the resultant continuous release of controlled substances to the atmosphere from these banks is a major challenge. Banks of controlled substances are not regulated under the Montreal Protocol. Furthermore, collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries including Ghana.

Concept:

Ghana intends to undertake a national inventory of ODS/HFC banks with the aims to establish a comprehensive database of used and /or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to build on an existing inventory of banks of used or unwanted controlled substances in Ghana, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and support on going cost-effective destruction. This project seeks to gather data and develop an inventory on stored waste RAC equipment and ODS, HFC and HC substances in collection centres throughout the country and will help identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up or enhancing appropriate policy measures to address them. They will assist in enabling Ghana to make informed decisions on the best cost-effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies where possible to enhance the collection and disposal of used or unwanted ODS / HFCs and their equipment.

Scope and Methodology:

The methodology / approach is informed by that recommended by the Climate and Ozone Protection Alliance (COPA) and GIZ. This includes an overview of the quantity of waste cooling equipment and ODS, HFC and HC substances stored in country and waste management companies and their capacity, policies/regulations and analysis of management option such as destruction and reclamation/recycling facilities to support end of life of RAC equipment's and refrigerants.

Stakeholder mapping:

National Ozone Unit (NOU), of the Environment Protection Authority (EPA) will lead the project implementation in collaboration with all relevant stakeholders such as refrigeration associations, importers, dismantlers, private sector, ministries, academia attorney general's office, professional bodies etc. This will also be in coordination with the National Committee on Ozone Depleting Substances (NACODS) as an advisory body for the NOU/EPA on all aspects related to ODS/HFCs.

Data collection and analysis:

Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development:

Compile the collected data into a centralized database, ensuring data integrity and security whilst ensuring the sustainability of the database.

Gap analysis:

Assess the current processes, infrastructure, and regulatory framework to identify new approached and existing areas for improvement.

Action plan:

Based on the inventory findings, develop a comprehensive action plan with specific goals, activities, responsibilities, and timelines for implementation.

Align with national plans and strategies:

Ensure the national inventory and action plan are integrated with broader national initiatives, such as the National cooling Plans and the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector:

Examine and propose modalities for the establishment and use of the recovery, recycling, and reclamation programs/facilities for refrigerants for the cooling sector.

Cross-sectoral coordination:

Collaborate with agencies responsible for controlled substances management, environmental protection, and the refrigeration servicing sector. The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances and global warming refrigerants and thus contribute to the objectives of the HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. Ghana under HPMP II aims to establish two refrigerant recovery, recycling and reclaim centres in the south and middle sectors of Ghana where appliances and refrigerant dominates. By conducting the national inventory of banks of controlled substances, this will provide important information on infrastructure siting as the inventory data sources will include seized chemicals from retailers of mislabelled or adulterated chemicals.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	- Determine approach on data collection methodology. - Desk study review on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. - Conduct stakeholder analysis with responsibilities and roles including new stakeholders e.g. dismantlers, retailers and private sector - Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. - Conduct further data collection, on-site visits and surveys as needed across the country.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	- Analyse the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. - Analyse existing policy and regulatory frameworks, including waste management	UNEP

	policies. • Project the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively or suitable for planned and existing facilities. • Assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. • Analyse the potential environmental benefits for the ozone layer and the climate. • Analyse the potential for substance recycling and reclamation for re-use. • Analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	• Set up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. • Prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure. • Elaborate on business / financing model to ensure long-term sustainability of collection / disposal operations. • Conduct stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. • Draft a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. • Finalize action plan for the considering of stakeholders and Steering committee	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	• Manage and monitor project activities. • Establishing national expert team. • Report and evaluate project progress. • Prepare initial and final report considering stakeholder comments. • Project progress properly monitored and evaluated, • Include gender mainstreaming considerations in the overall project	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	40,000	UNEP
Activity 2: Analysis of institutional, policy and	15,000	UNEP

regulatory frameworks		
Activity 3: Inventory of banks and preparation of action plan	20,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15,000	UNEP
TOTAL	90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed to support gender equality by enhancing women's access to leadership opportunities, and safe working environments. Monitoring and evaluation frameworks will include gender-specific indicators to assess the impact of project activities on gender inclusivity and make necessary adjustments.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances
Country:	Iraq
Implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	24 months
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): June 2025 – May 2027	
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	100,000 plus PSC

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO , please provide explanation:		

A. Information required for the funding request to prepare a national inventory of banks of used or unwanted controlled substances, and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
Since 1989, the Montreal Protocol has successfully regulated ozone-depleting substances (ODS). The Kigali Amendment expanded this to include hydrofluorocarbons (HFCs). Consequently, significant quantities of used and unwanted ODS and HFCs have accumulated worldwide, leading to ongoing atmospheric emissions that harm both the ozone layer and contribute to global warming. Currently, these stockpiles, known as "banks," are not regulated under the Montreal Protocol. Developing countries face substantial challenges in managing the collection, recovery, and disposal (recycling, reclamation, or destruction) of these substances. This project will create an inventory of used and unwanted ODS and HFC banks in Iraq, and develop a plan for their collection, transportation, and disposal, focusing on cost-effective recycling, reclamation, and destruction methods. The project will assess the emissions mitigation potential, in accordance with Executive Committee (ExCom) Decision 91/66, through analysis of existing legislation, policies, and stakeholder consultations. The final report and action plan will propose concrete actions and new legislation or policies to improve the collection and disposal of used and unwanted ODS and HFCs. The project's methodology may draw inspiration from recommendations provided by the Climate and Ozone Protection Alliance (COPA).

The inventory and action plan will target ODSs including HCFCs, to support Iraq's HCFCs Phase-out Management Plan (HPMP). This will be achieved by reducing emissions through improved containment, recovery, recycling, and reclamation (RRR), and environmentally sound disposal. The inventory will include seized chemicals at customs warehouses, contaminated waste chemicals and blends, and residues from recycling and reclamation. The action plan will detail strategies for the collection, transportation, storage, and disposal of used and unwanted controlled substances. It will also outline policies and regulations defining the roles and responsibilities of manufacturers and distributors, including any existing RRR programs.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	- Defining data collection methodology and approach with the project team. - Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. - Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. - Identifying laboratories able to analyse the composition of used or unwanted ODS / HFCs, and the need for upgrading such laboratories. - Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. - Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	- Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. - Analysing existing policy and regulatory frameworks, including waste management policies. - Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant. - Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. - Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use.	UNEP

	-Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	-Managing and monitoring project activities. Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	30,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	20,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	25,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	25,000	UNEP
TOTAL	100,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances
Country:	Oman
Implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	24 months
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): June 2025 – May 2027	
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	90,000 plus PSC

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: The NOU received an approval from the Government at later stage and the NOU was not able to request the inclusion of the request into UNEP's Business Plan at the time of its preparation.		

A. Information required for the funding request to prepare a national inventory of banks of used or unwanted controlled substances, and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes Since 1989, the Montreal Protocol has played a crucial role in regulating the production and consumption of ozone-depleting substances (ODS). With the Kigali Amendment, the protocol was further expanded to include hydrofluorocarbons (HFCs). As a result, large quantities of used and unwanted controlled substances have accumulated globally, with ongoing emissions being released into the atmosphere. These emissions not only damage the ozone layer but also intensify global warming. Unfortunately, banks of controlled substances are not currently regulated under the Montreal Protocol. For developing countries, managing the collection, recovery, and disposal (recycling, reclaim, and destruction) of used or unwanted controlled substances remains a significant challenge. The project aims to establish an inventory of banks of used or unwanted controlled substances in Oman, along with a plan for their collection, transport, and disposal, including consideration of recycling, reclamation, and cost-effective destruction. The project will quantify the mitigation potential in line with ExCom Decision 91/66, including an analysis of existing legislation and policies, as well as stakeholder consultations. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs.
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The methodology / approach might be inspired by that recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of banks of used and unwanted controlled substances and the action plan will cover ozone-depleting substances such as HCFCs, thereby contributing to the objectives of the HPMP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR), and environmentally sound disposal. This will encompass seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes. The national action plans include approaches for the collection, transport, storage, and disposal of used or unwanted controlled substances. Additionally, it would also contain a description of the policies and regulations describing the roles and obligations of manufacturers and distributors, including any recovery, recycling, and reclamation programmes.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	- Defining data collection methodology and approach with the project team. - Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. - Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. - Identifying laboratories able to analyse the composition of used or unwanted ODS / HFCs, and the need for upgrading such laboratories. - Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. - Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	- Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. - Analysing existing policy and regulatory frameworks, including waste management policies. - Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant. - Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated.	UNEP

	- Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use. - Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	- Managing and monitoring project activities. Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	25,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	25,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	25,000	UNEP
TOTAL	90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances.		

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS
OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE
COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING
CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE
DESTRUCTION**

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances	
Country:	Rwanda	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000 plus PSC	

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO, please provide explanation:		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
Context and Background: Rwanda is a committed party to the Montreal Protocol and its Kigali Amendment, which aims to phase down the use of Hydrofluorocarbons (HFCs) due to their high Global Warming Potential (GWP). This alignment with international agreements forms a key part of Rwanda's strategy to protect the ozone layer and mitigate climate change. As part of its climate action efforts, Rwanda has been transitioning to climate-friendly alternatives in refrigeration and air conditioning, ensuring the adoption of technologies that are both ozone- and climate-friendly. Rwanda is also making strides in improving energy efficiency in cooling technologies. The ongoing

development of electrical and electronic equipment regulation including Minimum Energy Performance Standards (MEPS) is expected to enforce energy efficiency, encourage the use of low-GWP refrigerants, and help meet Rwanda's national climate goals and energy savings targets. In addition, the country is actively engaged with the African Centre of Excellence for Sustainable Cooling and Cold-chain (ACES), which aims to advance sustainable cooling solutions across the continent.

Despite these advancements, Rwanda faces challenges related to the growing accumulation of refrigerants and end-of-life equipment. There is limited infrastructure for managing refrigerants and foam-blowing agents, and no specialized recovery, recycling, or reclamation facilities are in operation. While some progress has been made in dismantling old appliances, much of the equipment remains uncollected and improperly managed. The lack of adequate recovery and disposal facilities continues to result in the uncontrolled release of harmful substances into the atmosphere, with refrigerant banks largely unregulated under the Montreal Protocol. To address this issue, there is a need for a national inventory of refrigerant banks and the development of an action plan to manage these substances effectively.

Concept:

Rwanda intends to undertake a national inventory of ODS/HFC banks with the aims to establish a comprehensive database of used or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to establish an inventory of banks of used or unwanted controlled substances in Rwanda, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. The inventory helps identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up appropriate policy measures. They will assist in enabling the country in making an informed decision on the best cost-effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs.

Methodology

The methodology / approach might be informed by that recommended by the Climate and Ozone Protection Alliance (COPA).

Stakeholder mapping and engagement: National Ozone Unit (NOU), of the Environment Management Authority (REMA) will lead the project implementation in collaboration with all relevant stakeholders such as refrigeration associations, importers, private sector, ministries, academia, government agencies, healthcare sector, law enforcement, and the pharmaceutical industry.

Data collection and analysis: Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development: Compile the collected data into a centralized database, ensuring data

integrity and security.

Gap analysis: Assess the current processes, infrastructure, and regulatory framework to identify areas for improvement.

Action plan formulation: Based on the inventory findings, develop a comprehensive action plan for disposal of waste controlled substances with specific goals, activities, responsibilities, and timelines

Align with national plans and strategies: Ensure the national inventory and action plan are integrated with broader national initiatives, such as the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector: Examine the recovery, recycling, and reclamation programs for refrigerants, as they may involve the handling of controlled substances.

Promote cross-sectoral coordination: Foster collaboration between the agencies responsible for controlled substances management, waste management, environmental protection, and the refrigeration servicing sector.

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. The UNIDO investment component of the HPMP II and KIP aims to establish refrigerant recovery, recycling and establish reclaiming centre and infrastructures in Rwanda. By conducting the national inventory of banks of used or unwanted controlled substances it will assist informing how the infrastructure should be placed according to the heat spots of the banks of the controlled substances. The inventory data sources will include seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes and end-of-life appliances. By conducting the national inventory of banks of controlled substances, this will provide important information on infrastructure siting as the inventory data sources will include seized chemicals from retailers of mislabelled or adulterated chemicals.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	• Agreeing with project team on data collection methodology and approach. • Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. • Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders.	UNEP

	• Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. • Conducting further data collection, on-site visits and surveys as needed.	
Activity 2: Analysis of institutional, policy and regulatory frameworks	• Analyse the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. • Analyse existing policy and regulatory frameworks, including waste management policies. • Project the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively or suitable for planned and existing facilities. • Assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. • Analyse the potential environmental benefits for the ozone layer and the climate. • Analyse the potential for substance recycling and reclamation for re-use. • Analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Activity 3: Inventory of banks and preparation of action plan	• Setting up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. • Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. • Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. • Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation.	UNEP

	• Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. • Finalization of the action plan considering stakeholder comments.	
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	• Manage and monitor project activities. • Establishing national expert team. • Report and evaluate project progress. • Prepare initial and final report considering stakeholder comments. • Project progress properly monitored and evaluated, • Include gender mainstreaming considerations in the overall project	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	35,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	15,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15,000	UNEP
TOTAL	80,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations, training programs, and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed in support of gender equality by enhancing women's access to training, leadership opportunities, and safe working environments.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:	Preparation of National Inventory of Banks of Used or Unwanted Controlled Substances and National Plan
Country:	Saint Kitts and Nevis
Lead implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	July 2025 – June 2027
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify):	24 months
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	70,000 plus PSC

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO, please provide explanation: NA		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
Saint Kitts and Nevis has been successful in the implementation of the Montreal Protocol and the phase out of consumption of HCFCs since becoming Party to the Montreal Protocol in 1994. It has regulated this through “Substances that Deplete the Ozone Layer (Control) Regulations S. 63- SRO 6/2004” (The ODS regulations), a subsidiary legislation under the umbrella of the National Conservation and Environment Protection Act. Though Saint Kitts and Nevis has not yet ratified the Kigali Amendment, which has added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances under control, the Country has been collecting and reporting HFC data as part of its Country Programme (CP) and Article 7 (A7) Data. As a result of the consumption of these controlled substances, large banks of used or unwanted controlled substances have accumulated globally and in Saint Kitts and Nevis. Emissions from these banks are continuously being released to the atmosphere. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol nor by Saint Kitts and Nevis’ national regulations. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries and Saint Kitts and Nevis.

The project seeks to establish an inventory of banks of used or unwanted controlled substances in Saint Kitts and Nevis and a plan for the collection, transportation and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies and stakeholder consultation. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of unwanted ODS/HFCs. The methodology or approach can be inspired by the recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of used and unwanted controlled substances and action plan will cover ODS like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and future KIP to reduce emissions through good practices, containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouse, waste and containment chemicals, blends and residues from recycling and reclaim processes.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Data collection	Determine the data collection methodology and approach along with the NOU and stakeholders. Undertake a Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Identify laboratories able to analyse the composition of used or unwanted ODS and HFCs, and the need for upgrading such laboratories. Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. Conduct further data collection, on-site visits and surveys as needed.	UNEP
Stakeholder Analysis	Conduct a stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste collectors and traders	UNEP
Analysis of data collected	Analyse the data collected, including but not limited to: the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management; existing policy and regulatory frameworks, including waste management policies; forecast the amounts of used or unwanted ODS/HFCs which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant; assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated; analyse the potential environmental benefits for the ozone layer and the climate; analyse the potential for substance recycling and reclamation for re-use; analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Preparation of inventory report/national plan	Preparation of the Inventory report or National Plan: develop a database or inventory of banks of used or unwanted controlled substances; prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure; Develop a business or financing model to ensure long-term sustainability of collection or disposal operations; Conduct stakeholder consultations to present the draft	UNEP

	National Plan to obtain stakeholder input and validation; Draft recommended regulations and policies supporting the collection and disposal of used or unwanted ODS and HFCs and sustainable financing; Finalization and endorsement of the National Plan considering stakeholder contributions.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data Collection	\$23,000	UNEP
Activity 2: Stakeholder Analysis	\$15,000	UNEP
Activity 3: Analysis of data collected	\$12,000	UNEP
Activity 4: Preparation of inventory report/National plan	\$20,000	UNEP
TOTAL	70,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom Decision 92/40 and Document 92/51 the MLF's Gender Mainstreaming Policy and Performance Indicators will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances and National Plan. In the project's implementation, females will be encouraged to apply for available positions and the NOU will use female imagery in promotional material related to the project. Female imagery will be used as much as possible, in documentation produced during the preparation phase.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:	Preparation of National Inventory of Banks of Used of Unwanted Controlled Substances and National Plan
Country:	Suriname
Lead implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	July 2025 – June 2027
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify):	24 months
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	80,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO, please provide explanation:		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
Suriname has been successful in the implementation of the Montreal Protocol and the phase out of consumption of HCFCs since becoming Party to the Montreal Protocol in 1997. It has regulated this through the Merchandise Trade Act.58 and State Decree “Negative List no. 18 of 2003, amended by the Council of Ministers in February 2006. Though Suriname has not yet ratified the Kigali Amendment, which has added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances under control, the Country has been collecting and reporting HFC data as part of its Country Programme (CP) and Article 7 (A7) Data. As a result of the consumption of these controlled substances, large banks of used or unwanted controlled substances have accumulated globally and in Suriname. Emissions from these banks are continuously being released to the atmosphere. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol nor by Suriname’s national regulations. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries and Suriname. The project seeks to establish an inventory of banks of used or unwanted controlled substances in Suriname and a

plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies and stakeholder consultation. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of unwanted ODS/HFCs. The methodology or approach can be inspired by the recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of used and unwanted controlled substances and action plan will cover ODS like HCFC and global warming HFCs and thus contribute to the objectives of the HPMP and future KIP to reduce emissions through good practices, containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouse, waste and containment chemicals, blends and residues from recycling and reclaim processes.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Data collection	Determine the data collection methodology and approach along with the NOU and stakeholders. Undertake a Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Identify laboratories able to analyse the composition of used or unwanted ODS and HFCs, and the need for upgrading such laboratories. Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. Conduct further data collection, on-site visits and surveys as needed.	UNEP
Stakeholder Analysis	Conduct a stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste collectors and traders	UNEP
Analysis of data collected	Analyse the data collected, including but not limited to: the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management; existing policy and regulatory frameworks, including waste management policies; forecast the amounts of used or unwanted ODS/HFCs which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant; assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated; analyse the potential environmental benefits for the ozone layer and the climate; analyse the potential for substance recycling and reclamation for re-use; analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Preparation of inventory report/national plan	Preparation of the Inventory report or National Plan: develop a database or inventory of banks of used or unwanted controlled substances; prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure; Develop a business or financing model to ensure long-term sustainability of collection or disposal operations; Conduct stakeholder consultations to present the draft National Plan to obtain stakeholder input and	UNEP

	validation; Draft recommended regulations and policies supporting the collection and disposal of used or unwanted ODS and HFCs and sustainable financing; Finalization and endorsement of the National Plan considering stakeholder contributions.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data Collection	\$25,000	UNEP
Activity 2: Stakeholder Analysis	\$15,000	UNEP
Activity 3: Analysis of data collected	\$20,000	UNEP
Activity 4: Preparation of inventory report/National plan	\$20,000	UNEP
TOTAL	80,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom Decision 92/40 and Document 92/51 the MLF's Gender Mainstreaming Policy and Performance Indicators will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances and National Plan. In the project's implementation, females will be encouraged to apply for available positions and the NOU will use female imagery in promotional material related to the project. Female imager will be used as much as possible, in documentation produced during the preparation phase.		

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS
OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE
COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING
CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE
DESTRUCTION**

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances	
Country:	The United Republic of Tanzania	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000 plus PSC	

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☒	☐
If NO , please provide explanation: The project is being submitted in line with ExCom decision 93/26(b) which allows, on an exceptional basis, bilateral and implementing agencies to submit the project during 2024 even in cases where such projects had not been included in the agencies' business plans		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
The United Republic of Tanzania is a party to the Montreal Protocol on Substances that deplete the ozone layer and has successfully been implementing the Protocol through the control of production and consumption of Ozone Depleting Substances. The Kigali Amendment aimed at phasing down the use of Hydrofluorocarbons (HFCs) due to their high global warming potential. The adoption of the Montreal Protocol and the Kigali Amendment which promote the use of climate friendly alternatives has resulted in the refrigeration and air conditioning sector transitioning to zero ozone depletion potential and low global warming potential technologies consistent with the provisions of the Kigali Amendment to the Montreal

Protocol. This has ultimately led to the accumulation of banks of used or unwanted controlled substances in Tanzania due to the lack of proper ODS/HFC recovery, recycling, reclamation, destruction facilities and therefore the controlled substances are continuously being released to the atmosphere from these banks. The emissions from the banks are detrimental to the ozone layer, contribute to global warming and are also taken away or undoing the efforts that have been done in ozone protection and climate change mitigation. Banks of controlled substances are not regulated under the Montreal Protocol. Furthermore, collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries.

Concept: The national inventory aims to establish a comprehensive database of used or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to establish an inventory of banks of used or unwanted controlled substances in Tanzania, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. The inventory helps identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up appropriate policy measures. They will assist in enabling the country in making an informed decision on the best cost effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs

The methodology / approach might be informed by that recommended by the Climate and Ozone Protection Alliance (COPA). Stakeholder mapping and engagement: Identify and involve key stakeholders from government agencies, healthcare sector, law enforcement, and the pharmaceutical industry.

Data collection and analysis: Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development: Compile the collected data into a centralized database, ensuring data integrity and security.

Gap analysis: Assess the current processes, infrastructure, and regulatory framework to identify areas for improvement.

Action plan formulation: Based on the inventory findings, develop a comprehensive action plan for safe disposal of waste controlled substances with specific goals, activities, responsibilities, and timelines

Align with national plans and strategies: Ensure the national inventory and action plan are integrated with broader national initiatives, such as the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector: Examine the recovery, recycling, and reclamation programs for refrigerants, as they may involve the handling of controlled substances.

Promote cross-sectoral coordination: Foster collaboration between the agencies responsible for controlled substances management, waste management, environmental protection, and the refrigeration servicing

sector.

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. The UNIDO investment component of the HPMP II aims to establish refrigerant recovery, recycling and reclaim infrastructures in Tanzania. By conducting the national inventory of banks of used or unwanted controlled substances it will assist informing how the infrastructure should be placed according to the heat spots of the banks of the controlled substances. The inventory data sources will include seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes and end-of-life appliances.

In preparation for transportation, there is possibility of collaborating with Coordination Unit of Disposal of PCB oils contained in transformers and disposal of capacitors containing PCB Project under the Stockholm convention, to utilize the temporary storage site (under construction) to store and package the collected substances. This centralised storage mechanism will facilitate for efficient transportation.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Activity 1: Data collection and stakeholder analysis	• Agreeing with project team on data collection methodology and approach. • Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. • Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste dealers. • Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. • Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	• Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. • Analysing existing policy and regulatory frameworks, including waste management policies. • Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively.	UNEP

	- Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. - Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use. - Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	- Managing and monitoring project activities. - Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	35,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	15,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15,000	UNEP
TOTAL	80,000	

4. How will the Multilateral Fund gender policy be considered during project preparation?
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The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations, training programs, and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed in support of gender equality by enhancing women's access to training, leadership opportunities, and safe working environments.
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PROJECT PROPOSAL

1. DETAIL OF PROJECT PROPOSAL

- 1.1 **Project title:** Additional Emergency Assistance for Institutional Strengthening
- 1.2 **Country:** Maldives
- 1.3 **National implementing agency/project management unit:** Ministry of Tourism and Environment
- 1.4 **Lead Implementing Agency:** UNEP

2. BACKGROUND AND INTRODUCTION

The Republic of Maldives is an original signatory to the Montreal Protocol since 1988 and has ratified all Amendments including the Kigali Amendment. As an Article 5 country, Maldives successfully completed its HCFC Phaseout Management Plan (HPMP). Maldives was the first Article 5 Party to phase-out the consumption of HCFCs, 10 years ahead of the schedule.

On 12th December 2024, Maldives faced an unforeseen setback when a devastating fire incident occurred. The fire engulfed three key government ministries, including the Ministry of Tourism and Environment. Tragically, the National Ozone Unit (NOU), which operates under this ministry, lost all its computers, equipment, fixtures, critical documentation, and other materials in the blaze. The incident dealt a significant blow to the NOU's operational capacity, disrupting its ability to perform its functions effectively.

Planning for the construction of a new office building is ongoing. Currently, the National Ozone Unit, along with the other affected government offices, is operating from a temporary facility in the capital city. While the government has assured that a permanent office space will be allocated to the NOU, the immediate need for support remains essential.

Maldives remains steadfast in its commitment to fulfilling its obligations under the Montreal Protocol. To continue playing a leadership role in ozone layer protection and climate action, it is essential to rebuild the operational foundation of the National Ozone Unit.

3. OBJECTIVES AND OUTPUTS

Objective: To assist the National Ozone Unit in fully restoring its normal operational capacity. This request for emergency assistance is designed to support the National Ozone Unit (NOU) in fully restoring its operational capacity following the devastating fire incident in December 2024. The fire resulted in the total loss of computers, equipment, fixtures, critical electronic and paper documentation essential to the NOU's daily functions.

Currently, NOU is operating from a temporary office space provided by the government with limited IT and communication tools, this solution is not sufficient to restore the unit to its full capacity. To ensure the NOU's short and long-term effectiveness, additional support is required to restore its IT infrastructure and for its final relocation to a permanent office space.

In order to effectively recover and strengthen its resilience to future disasters, NOU requires comprehensive assistance to replace lost assets and implement measures to safeguard its operations going forward.

Key Project Outputs

1. Procurement of equipment and materials for the day-to-day functioning of the NOU:
 - The fire destroyed all equipment and materials needed for the smooth operation of the NOU. This emergency assistance will partially fund the replacement of essential equipment, such as IT equipment, basic office furniture and consumables.
 - The Government of Maldives will cofinance the rehabilitation of the NOU by financing the building of a new office in a new location. The building will host the Ministry of Tourism and Environment, and the NOU within it, the development planning is ongoing and construction is expected to begin by Q3 2025.

- Further contribution has been discussed in the context of south-south cooperation as the Government of China through its Foreign Environmental Cooperation Center of the Ministry of Ecology and Environment (FECO/MEE) has expressed the willingness to support the Maldivian Ministry of Tourism and Environment by providing technical support in the planning of the Air Conditioning system (chiller, VRFs or else that will be selected following the advancement of the building planning) and insulation systems, and by providing materials for the purpose of installation in the new building once the construction work will start. UNEP will facilitate and coordinate further discussions on the possible cooperation between the two countries.

4. PROJECT ACTIVITIES AND TARGETS

- **Activities:** Purchase of IT equipment, basic office furniture and consumables.
 - Purchasing urgent items required for the temporary space (4 desktop computers, 2 laptops, 4 computer screens, 1 office projector, 2 printers, consumable and stationery), and purchasing the required office equipment and furniture for the permanent space once this is completed.

BUDGET TABLE

Activity	Activities	Outputs	Unit cost (US \$)	Total requested from MLF (US\$)	Government Contribution (US \$)
Activity Area 1: Support for National Ozone Unit	1.1: Purchase of basic IT equipment for short term return to acceptable level of operation	4 desktop computers	\$1,500	\$6,000	
		2 laptops + deck	\$2,000	\$4,000	
		4 computer screens	\$500	\$2,000	
		1 office projector	\$1,500	\$1,500	
		2 office printers	\$1,500	\$3,000	
		Stationery and consumable		\$3,500	
		Sub-total		\$20,000	
	1.2: Purchase of furniture for permanent NOU relocation once building construction is completed	Desks, chairs, lighting, etc.		\$10,000	\$20,000
Grand Total				\$30,000	\$20,000

ACTIVITY TIMELINE

The activities are expected to be completed by June 2027

Activity	Sub-Activity Description	2025	2026				2027	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity Area 1: Support for National Ozone Unit	1.1: Purchase of basic IT equipment for short term return to acceptable level of operation							
	1.2: Purchase of furniture for permanent NOU relocation once building construction is completed							

ANNEX – photos





**TWINNING OF
OZONE OFFICERS AND NATIONAL ENERGY EFFICIENCY
POLICYMAKERS TO SUPPORT KIGALI AMENDMENT
OBJECTIVES (PHASE I)**

FINAL REPORT

Submitted by
United Nations Environment Programme
to the 96th meeting of the Executive Committee
of the Multilateral Fund

28 March 2025

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EXECUTIVE SUMMARY

Through Decision 91/42, the Executive Committee of the Multilateral Fund approved the project "Twinning of ozone officers and national energy-efficiency policymakers to support Kigali Amendment objectives (Phase I: 2023–2024)" (GLO/SEV/91/TAS/365) for UNEP implementation. The decision also indicated that on the basis of the results of the project, UNEP could consider the development of a second phase that would take into account the outcomes of the workshops conducted in the first phase of the project and include an action plan to address any regional needs identified through the implementation of that first phase. Decision 93/91 requested UNEP to submit a final report detailing lessons learned from the implementation of the first phase when submitting the second phase of the project. This report summarizes the results and lessons learned during Phase I.

This technical assistance project made significant progress in strengthening the capacity of the participants to support the Kigali Amendment objectives and improve energy efficiency and thereby address climate change. Between 2023 and 2024, UNEP's regional Compliance Assistance Programme (CAP) teams organized eight two-day workshops that brought together the concerned stakeholder groups from Article 5 countries (developing countries) from the following regions: Anglophone Africa, Francophone Africa, Caribbean, Latin America, Europe & Central Asia, South Asia, Southeast Asia, Pacific Island Countries, and West Asia. These workshops, which were held back-to-back with UNEP's Regional Network meetings for cost-efficiency reasons, collectively enabled 422 participants to discuss and share strategies to maximize the positive climate impact of transitioning to new refrigerants and improve energy efficiency in the refrigeration and air conditioning (RAC) sector.¹

The Twinning workshops highlighted the importance of collaborative efforts to advance energy efficiency and ozone protection initiatives in and between the different Article 5 countries. Stakeholders identified crucial strategies to overcome challenges in transitioning to sustainable RAC practices, including advocating for integrated environmental policies, implementing energy efficiency standards, recommending energy-efficient procurement guidelines, and strengthening cooperation among relevant authorities.

This report covers the Twinning workshops' key insights, recommendations, and outcomes, emphasizing the promotion of energy efficiency and ozone protection, with a focus on RAC systems.

This project achieved key outcomes and provided valuable lessons across several key areas, as demonstrated by the experiences and successes of different regional networks:

- ***The workshops successfully fostered stronger collaboration among National Ozone Officers (NOOs), National Energy Efficiency Policymakers (NEEPs), and Financial Mechanism Focal Points (FMFPs).*** Participants emphasized the importance of interagency collaboration and stakeholder engagement in advancing clean cooling objectives, creating a platform for ongoing dialogue and cooperation across sectors. For example, Nigeria and Niger demonstrated effective models of institutional integration through inter-institutional technical committees for cooling, which streamlined policy development and reduced redundancies. Similarly, the Caribbean

¹ The workshop reports are available on the OzonAction Meeting Portal at <https://www.ozonactionmeetings.org>. See Annex.

Network highlighted the need for stronger coordination between NOOs and NEEPs to align national and regional policies, showcasing how collaboration can drive progress in sustainable cooling.

Lesson Learned: Strengthening partnerships across ministries and sectors is essential for advancing clean cooling objectives and ensuring cohesive policy implementation.

- ***The project facilitated the alignment of national energy efficiency policies with the goals of the Kigali Amendment.*** Participants explored the strategic advantages of integrating Minimum Energy Performance Standards (MEPS), energy labeling, and National Cooling Action Plans (NCAPs) into broader climate strategies, ensuring a cohesive approach to sustainable cooling. For instance, the Pacific Islands Network recommended harmonizing standards across South Pacific and Northern Pacific countries to facilitate smoother trade and improve compliance. Barbados showcased its successful implementation of MEPS, aligning energy efficiency with Kigali Amendment goals, while Mexico highlighted its NOM-ENER standards as a strong regulatory framework supporting energy efficiency and emissions reductions.

Lesson Learned: Harmonizing MEPS and energy labeling across regions can create consistent market frameworks, encouraging the adoption of energy-efficient products and reducing trade barriers.

- ***The workshops highlighted technological advancements in the RAC sector and provided concrete technical guidance on optimizing RAC systems for both ozone and energy benefits.*** For example, Southeast Asia showcased advanced approaches where Singapore's mandatory technician training programs for water-cooled chillers and Thailand's studies on high-efficiency mobile air conditioning systems exemplify how targeted initiatives can promote sustainable practices. In Latin America, participants explored how "transitioning to high-efficiency cooling systems could double the climate mitigation benefits of the HFC phase-down. The Africa Francophone workshop highlighted innovative solutions from Cameroon and Sierra Leone, including solar refrigeration and natural building materials.

Lesson Learned: Investing in advanced technologies and providing technical guidance can significantly enhance energy efficiency and climate mitigation efforts.

- ***The project emphasized the importance of capacity building, providing participants with available resources to strengthen national energy efficiency capacities.*** The success stories presented inspired confidence and provided actionable insights for advancing clean cooling objectives. For instance, Brazil's Procel program was highlighted for its large-scale technician certification initiatives, and Tonga's collaborative workshops for RAC technicians were cited as a replicable model for hands-on training. These initiatives equipped stakeholders with the skills needed to implement and maintain energy-efficient systems.

Lesson Learned: The shortage of skilled technicians and trained personnel in the RAC sector highlights the need for expanded training programs and capacity-building initiatives to ensure the effective deployment and maintenance of energy-efficient systems.

- ***The workshops facilitated cross-regional collaboration, enabling participants to share best practices, harmonize standards, and coordinate initiatives.*** This regional synergy amplified efforts to achieve sustainable cooling solutions and meet international climate commitments, fostering a unified approach to energy efficiency and refrigerant transition. For example, the Europe & Central Asia/West Asia Network joint workshop in Amman, Jordan, emphasized the integration of energy efficiency into national cooling policies, while the Southeast Asia Network workshop in Guangzhou, China, highlighted the importance of harmonizing standards across ASEAN countries.

Lesson Learned: Cross-regional collaboration amplifies efforts to achieve sustainable cooling solutions and fosters a unified approach to energy efficiency and refrigerant transition.

- ***The project emphasized the importance of raising public awareness about the benefits of energy-efficient technologies.*** Participants recognized the need for targeted consumer education campaigns to drive demand for sustainable cooling solutions and ensure widespread adoption of energy-efficient practices. For example, Samoa's outreach campaigns targeting consumers and retailers were highlighted as successful models for improving compliance and market transformation, while Thailand's star rating program for air conditioners demonstrated how consumer awareness can drive demand for efficient products.

Lesson Learned: Public awareness campaigns are essential to drive consumer demand for sustainable cooling solutions and ensure widespread adoption of energy-efficient practices.

- ***The workshops introduced participants to a range of international financing opportunities, including the Multilateral Fund and the Green Climate Fund.*** Innovative financial models, such as public-private partnerships and incentive schemes, were identified as key strategies for scaling adoption and ensuring the affordability of energy-efficient technologies. For instance, Colombia's tax incentives for energy-efficient appliances and the Caribbean Network's exploration of "Cooling-as-a-Service" models showcased how innovative financing can reduce barriers to adoption.

Lesson Learned: Innovative financing mechanisms and access to international funding sources are essential to overcome cost barriers and scale energy efficiency projects.

- ***The project highlighted the importance of robust monitoring and compliance systems to ensure the effective enforcement of policy frameworks.*** Participants recognized the need for data-driven approaches to track progress, identify gaps, and refine strategies for achieving sustainable cooling goals. For example, Fiji's integration of international energy efficiency standards into national policies demonstrated measurable reductions in electricity consumption and greenhouse gas emissions, while Singapore's regular inspections of physical and online marketplaces ensured compliance with MEPS and labeling requirements.

Lesson Learned: Robust monitoring and compliance systems are critical to ensure the effective enforcement of policy frameworks and achieve sustainable cooling goals.

These key outcomes and lessons learned demonstrate the Twinning Project's success in fostering collaboration, enhancing policy integration, and building capacity to support the transition to energy-efficient, low-Global Warming Potential (GWP) refrigerants in alignment with the Kigali Amendment

Report structure

This final report provides a comprehensive overview of the project. It is structured to first introduce the framework and objectives of the Twinning Project, followed by a detailed explanation of the implementation methodology used across all networks. The core of the report presents overall network-specific insights and analyses from each of the eight regional workshops, highlighting their unique contexts, challenges, and achievements. These regional analyses are followed by common and shared findings, challenges, and recommendations that emerged across all networks.

The report then provides data analysis with visual insights on participation demographics, workshop evaluations, and gender analysis. Finally, the report concludes with the appendices providing network-specific completion reports, as supporting documents, for the eight workshops organized.

Acknowledgments

Gratitude is extended to all contributors to the success of the Twinning project:

- NOOs, NEEPs, and FMFPs for their active participation and commitment to the Kigali Amendment objectives.
- The host countries for their hospitality and logistical support in regional workshops.
- Multilateral Fund Secretariat for its strategic vision and contributions to the meetings.
- United for Efficiency (U4E) for their technical expertise and capacity-building resources.
- The other Implementing Agencies, bilateral agencies, and regional energy efficiency organizations for their presentations and insights during the Twinning workshops.
- Technical experts and presenters for their contributions to knowledge sharing.

1. INTRODUCTION

Overview

The Executive Committee of the Montreal Protocol's Multilateral Fund approved the global technical assistance project entitled "Twinning of Ozone Officers and National Energy Efficiency Policymakers to Support Kigali Amendment Objectives" (subsequently referred to as "Twinning Project") – the first phase of which was to be implemented in 2023–2024. The main goal of this project is to enhance the climate benefits of transitioning to new refrigerants by simultaneously improving the energy efficiency of the cooling sector through better coordination of policies and programmes at national and regional levels. NOOs manage the implementation of the Montreal Protocol at the country level. The project aims to assist NOOs to further (i) align their national Montreal Protocol compliance programs with the 2019 Kigali Amendment and (ii) include energy efficiency considerations in the refrigeration and air conditioning sector.

This initiative is part of the approved work plan for the 2023 Compliance Assistance Programme (CAP) and supports UNEP's 2021–2023 CAP Strategy. It also indirectly supports implementation of national projects, notably HCFC Phase out Management Plans (HPMPs) and Kigali HFC Implementation Plans (KIPs). Under the CAP, the Regional Networks of National Ozone Officers promotes the exchange of information, experience, and know-how between Article 5 countries. This Twinning Project was linked to the Regional Networks and involved engaging one NEEP and optionally one FMFP per country to collaborate or "twin" with the NOOs. This participation seeks to encourage energy efficiency in the Montreal Protocol implementation.

Twinning workshops

UNEP organized eight Twinning Workshops during 2023 and 2024, for NOOs, NEEPs, and FMFPs from the Regional Network countries. These workshops were arranged to run back-to-back with Regional Network meetings held for NOOs, thereby reducing the additional time commitment and travel costs for the NOOs. Participation was voluntary, offering a platform for officials and partners to interact and learn from each other.

The workshop forums created an opportunity for the NOOs and their NEEP and FMFP counterparts to interact, exchange experiences, share knowledge, coordinate policies, and identify potential joint activities to advance the ozone-energy efficiency-climate agenda. It also enabled networks to be established among people in similar roles in other countries and with regional and international partners.

It further established a framework for future engagement by UNEP and/or other organizations in specific countries and regions, informed by the identified needs.

Twinning project objectives and sustainability

Interaction between these key stakeholders sought to encourage cooperation at the national level between these stakeholder groups and enable individual governments to integrate energy efficiency more rapidly into their ongoing Montreal Protocol, energy policy, and climate policy processes. To achieve this, twinning activities aimed to:

- Share success stories and experiences from various countries and agencies.
- Enhance communication and coordination among stakeholders and ongoing projects.
- Facilitate better coordination between NOOs and other government stakeholders.
- Enhanced understanding among NOOs and NEEPs of available funding mechanisms and increased knowledge of innovative financing approaches
- Support the development of national policies and planning for energy efficiency in the cooling sector.

2. IMPLEMENTATION METHODOLOGY

Project initial preparation

To ensure effective implementation of the Twinning Project, a structured approach was adopted across all regional CAP teams and supported by the Global CAP team, encompassing the following key elements.

At the project's inception, a comprehensive implementation plan was developed and agreed upon, outlining roles and responsibilities for achieving the project's results and outputs. The Global CAP team provided overarching strategic direction and comprehensive guidance materials during the Twinning Project's inception phase. To build implementation capacity, the Global CAP Team conducted orientation sessions with regional teams, providing detailed briefings on project objectives, training on using the "Twinning Project Resources Toolbox", and guidance on engaging appropriate regional consultants. Additionally, they engaged key international stakeholders securing high-level support and technical resources that enhanced the project's credibility and effectiveness across all participating regions. Simultaneously, the Regional CAP teams took the lead in organizing and executing workshops precisely tailored to their specific regional contexts, strategically engaging local and regional stakeholders, and identifying region-specific priorities and challenges.

Following consultations with regional teams, a strategic adjustment was made regarding technical expertise deployment. Rather than hiring a single global consultant, the project engaged specialized regional consultants with extensive energy efficiency experience to support each CAP team in their respective regions. This approach offered multiple significant advantages at no additional costs:

- It strengthened and leveraged existing local capacity, engaging experts already familiar with regional institutions, policy frameworks, and stakeholder networks. Regional consultants brought a contextual understanding of specific challenges, whether addressing high energy costs and fossil fuel dependence in Caribbean nations, developing approaches to harmonize standards across geographically dispersed Pacific Islands, or navigating complex institutional frameworks in African regions where responsibilities were often fragmented across multiple ministries.
- Regional consultants facilitated more effective communication by understanding local languages, cultural contexts, and regional priorities. This was particularly valuable in regions like Francophone Africa, where participants specifically highlighted the need for French-language resources and region-specific materials.
- The approach supported long-term capacity building within regions, creating a network of trained experts who could continue supporting energy efficiency initiatives beyond the project timeline. This built sustainable regional expertise rather than temporary external support that would end with the project.

- Regional consultants offered greater cost-efficiency due to lower travel requirements and existing knowledge of regional structures, eliminating lengthy onboarding processes a global consultant would have required to understand diverse regional contexts.

This plan and approach served as the foundation for all subsequent activities.

Resource allocation and the Twinning project resources toolbox

Based on the agreed implementation plan, project resources were identified and allocated to ensure sufficient support for each activity. A key output of this process was the development by the Global CAP team of a collection of different project resources. It was designed to support the Regional CAP teams in effectively managing every phase of the project—before, during, and after each workshop. This Toolbox offered a tailored framework for each region, including:

- Step-by-step instructions for structuring agendas, templates for participant registration and feedback, and other practical tools to facilitate smooth workshop operations.
- Training resources on key themes such as energy efficiency, low-GWP refrigerants, and policy integration, aligned with the goals of the Kigali Amendment and the Montreal Protocol.
- Detailed checklists to assist teams in managing the logistics of organizing workshops, as well as templates for tracking progress and measuring success.

The project was built upon defined goals and objectives, and carefully structured to ensure efficient delivery, this framework was shared with regional teams, whose feedback was crucial in shaping the final project implementation plan. By providing these tailored and practical resources, UNEP ensured that workshop teams were well-equipped to address regional challenges and opportunities.

Preparation and organization of the Twinning workshops

Twining workshops were organized by the respective regional CAP teams and conducted for each of the ten regional networks. Preparation for this workshop included the following activities:

- Identification of workshop participants: Criteria were established for nominating NEEPs and FMFPs. These criteria helped countries select and nominate participants for the workshop. Each country was requested to nominate a NEEP (mandatory) and a FMFP (optional). For the NEEP, the criteria include position, expertise, and knowledge, focusing on their familiarity with national energy policies and programs. Similarly, for the FMFP, the criteria include position, expertise, and knowledge related to financing strategies and policies. Both nominees should demonstrate engagement and commitment to actively participate in the workshop and contribute to discussions and activities both prior to and after the workshop.
- Development of the needs assessment survey: As part of the Twinning project toolbox, a comprehensive needs assessment questionnaire was developed and shared with participants to identify key topics, information needs, and knowledge gaps related to energy efficiency and low-GWP refrigerants. These inputs were intended to shape the workshop agenda and priorities.
- Logistics of travel and accommodation: Extensive logistical arrangements were required to secure attendance of more than 422 participants in different Twinning workshops. These were managed by the UNEP OzonAction CAP staff with local logistical support provided by the host country.

Twinning workshops organization phases

The organization of each Twinning workshop consisted of three phases: Pre-workshop, Workshop, and Post-workshop. An overview of the tasks and activities for each phase is described below.

Pre-twinning workshop phase

This was the planning and final preparation phase for the workshop not including the workshop logistics. Final planning and preparation commenced with the appointment of a workshop facilitator / energy expert to assist with the agenda structure, workshop planning, and facilitation of discussions. The “Twinning Workshop Toolkit” provided the backbone for the final planning of the workshop and made it possible to provide a meaningful twinning experience to participants. Activities included:

- Distribution of the needs assessment survey to NOOs, NEEPs, and FMFPs to gather their input and identify priority topics for inclusion in the workshop.
- Workplan and checklist. The checklist that was available in the toolbox provided a useful guide for the final preparation activities. The work plan focused on the critical activities necessary to offer an engaging workshop to participants from diverse backgrounds and countries at various stages of implementation.
- The Twinning workshops agendas were normally drafted drawing heavily on the needs assessment survey specifically to gather their input and identify priority topics for inclusion in the workshop. The results of this survey directly informed the workshop agenda development, and so this needs-based approach to agenda development ensured that the workshops were responsive to participant priorities and tailored to address the specific challenges faced by stakeholders in different regions. Afterward, the agendas were finalized with confirmation of all the speakers and time allocations and grouping of activities shaped by the needs assessment.
- Technical experts from partner international and regional organizations were identified and engaged as speakers/trainers. Their willingness to contribute to the workshop was remarkable and testimony to the goodwill for this initiative and their passion for the subject matter.
- Case studies were identified from the network countries and participants were invited to prepare and present these to the forum. Case studies were required to highlight any collaboration between NOOs and NEEPs.
- Workgroup materials were prepared to facilitate active engagement.
- An initial list of existing tools and capacity-building/information materials was identified to supplement the material already available in the toolkit. The intention was that these materials would facilitate effective knowledge sharing and capacity building during the workshop, as required.

During the workshop

The workshop's structure was designed to create a dynamic and engaging learning environment and knowledge-sharing platform. The agenda included a variety of sessions incorporating input provided by external experts, experiences shared by participants from within the group, interactive workgroup sessions, and networking opportunities. Both workshop days offered diverse activities that included:

- The **workshop opening and closing** were delivered by the Government of the host country, with participation by high-level dignitaries and UNEP representatives emphasizing the importance of the network's twinning activities.
- **Breakout working group exercises** were designed to help build relationships within the region and between the different roles. Participants had the opportunity to collaborate with people in similar roles in other countries and across different roles to complete workgroup assignments. Both workshop days had a workgroup activity on the agenda. Workgroup sessions concluded in plenary with interactive discussions.
- **Case studies** were presented by countries from within the networks that had made significant progress with policy frameworks and instruments, programmes, and financing schemes. It provided an opportunity for participants to learn from their peers. Presenters and participants had the opportunity to share success stories and challenges in their respective countries, ask questions, and discuss different solutions. Feedback suggested that these were a highlight of the workshop and led to valuable discussions and engagement in the group. Feedback also suggested that more opportunities for discussion would have been welcomed. Participants were encouraged to follow up on these discussions during breaks.
- **Knowledge-sharing and capacity-building** sessions were led by experts from different regional and international organizations. Expert inputs provided information regarding technical and financial resources, technology developments, and capacity-building opportunities that are available to countries and specifically to the countries in this network. Participants had the opportunity to ask questions and engage with speakers.

On day 2, an evaluation form was distributed, inviting participants to provide feedback on their workshop experience and indicate additional areas for development, capacity building, and future engagements.

3. TWINNING WORKSHOPS INSIGHTS AND ANALYSIS

ANGLOPHONE AFRICA

Africa Anglophone Network Twinning Workshop, 13-14 June 2024, Maputo, Mozambique

Context - Anglophone Africa

In many countries across Africa's Anglophone region, unreliable electricity grids and limited access to markets in rural areas pose significant challenges for the adoption of modern cooling solutions. The increasing demand for cooling, driven by rising temperatures and rapid urbanization, is placing additional strain on energy systems and contributing to a rise in greenhouse gas emissions. Although some nations have introduced policies such as Minimum Energy Performance Standards (MEPS) to address these issues, the enforcement and harmonization of such policies remain inconsistent throughout the region. Compounding the problem is a shortage of trained technicians and a lack of expertise among policymakers, which further hinders the



effective adoption and regulation of energy-efficient cooling systems. In addition, consumers often lack awareness of the benefits associated with energy-efficient solutions, while the markets are inundated with low-cost, inefficient products that dominate the landscape. This combination of factors presents substantial challenges to building a sustainable and energy-efficient cooling infrastructure in the region.

Needs assessment and lessons learned - Anglophone Africa

- Participants highlighted the importance of understanding funding processes and accessing resources from the Multilateral Fund. Practical workshops or modules on structuring "bankable" project proposals and navigating co-financing expectations were identified as a priority.
- Strengthening standards and certification frameworks was emphasized, with existing resources like U4E guides providing comprehensive guidance on establishing product registration systems and compliance monitoring. Harmonizing these standards across the region was recognized as critical to improving enforcement and market regulation.
- Inconsistent enforcement of MEPS and energy labelling was noted as a recurring issue. Participants recommended sharing lessons from successful implementations to strengthen regional enforcement mechanisms.
- Targeted interventions for sectors like hospitality were proposed, including consolidated guidelines for energy-efficient cooling and data collection on public health impacts from noncompliant refrigerants.
- UNEP and UN-Habitat guides on sustainable building design were recognized as valuable resources for promoting energy efficiency, with recommendations for broader dissemination and adaptation to local contexts.
- Tailored support for countries struggling with Kigali Amendment implementation was deemed crucial. Proposed solutions included mentorship programs, networking opportunities, and customized journey maps guided by U4E frameworks. Pairing countries with twin or sister nations within the African network or internationally was suggested to facilitate knowledge sharing and accelerate compliance efforts.

Summary of key outcomes - Anglophone Africa

- The workshop fostered stronger national and regional collaboration, enabling knowledge sharing and network building. Roles and responsibilities among stakeholders in the Refrigeration and Air Conditioning (RAC) sector were clarified, and the importance of interagency collaboration and stakeholder engagement in advancing clean cooling objectives was emphasized.
- Networking opportunities created at the workshop facilitated connections among national, regional, and international stakeholders. Strengthened relationships established during the workshop provide a solid foundation for future collaboration and successful implementation of clean cooling policies and initiatives.
- Discussions reinforced the need for strong partnerships across ministries, particularly between energy and financial focal points, to ensure the effective implementation of clean cooling policies. Participants gained a clearer understanding of their roles, the importance of collaboration, and the benefits of knowledge sharing to advance Kigali Amendment commitments.
- Participants gained awareness of the increasing demand for cooling in warm climates and the potential for policy interventions, such as MEPS, to improve energy efficiency. RAC solutions that

produce less heat, use efficient refrigerants, and align with clean cooling objectives were discussed as achievable through strategic policy actions.

- Knowledge-sharing sessions highlighted available tools and resources, including model standards and regulations, and emphasized their potential for harmonization within regional blocs like SADC and EAC. Key elements of national cooling plans, baseline development, and integrated policy planning across ministries were explored, showcasing expected economic, environmental, and efficiency benefits.
- Participants learned about training and skills development programs available to build capacity for implementing energy-efficient cooling solutions, both in-person and online. They identified tools and resources that could be leveraged to enhance the capacity of NOOs and NEEPs.
- Presentations provided an overview of RAC technology advancements, showcasing efficiency gains achievable through policy interventions. Participants gained insights into how MEPS and other regulatory frameworks could drive efficiency improvements in the RAC sector.
- Awareness of financing options and potential funding sources was raised through discussions led by representatives from the Multilateral Fund. Participants explored innovative financing models, such as subsidies, private-sector finance, and business models like “Cooling-as-a-Service,” to improve the affordability and accessibility of energy-efficient cooling appliances.
- Participants benefitted from shared experiences, with case studies highlighting common challenges and successful strategies from other countries. These examples inspired confidence that implementation challenges could be overcome and provided actionable insights for advancing clean cooling objectives.

Recommendations and future directions - Anglophone Africa

- Structured training programs and information material on low-GWP refrigerants, energy-efficient technologies, and policy enforcement could be implemented through regional centres of excellence, such as the Africa Centre of Excellence for Sustainable Cooling and Cold-Chain.
- Collaboration among Anglophone countries should be strengthened through joint initiatives such as harmonized MEPS and energy labelling strategies, while promoting peer learning through shared case studies.
- Innovative financing mechanisms, including public-private partnerships and access to international climate funds, should be prioritized. Sustainable cooling projects should be integrated into national development plans to attract funding and private-sector investment.
- Public awareness campaigns should be launched to highlight the cost savings and environmental benefits of energy-efficient cooling solutions, driving consumer demand for compliant and sustainable technologies.
- Tailored mentorship and capacity-building efforts could be offered to countries facing specific implementation challenges, with a focus on addressing local needs and gaps.

CARIBBEAN

Caribbean Network Twinning Workshop, 27-28 June 2024, Panama City, Panama

Context - Caribbean: As a collection of island nations, the region relies heavily on imported fossil fuels for electricity generation, leading to some of the highest energy costs in the world. This dependence creates significant barriers to adopting energy-efficient technologies, and adding to this challenge is the region's acute vulnerability to climate change, with frequent extreme weather events necessitating resilient infrastructure and sustainable cooling solutions. Moreover, limited technical expertise and institutional capacity have hindered the implementation of advanced RAC systems and energy efficiency measures. Despite these obstacles, the region has demonstrated a solid commitment to climate resilience. Regional collaboration and a growing focus on innovative technologies position the Caribbean to emerge as a leader in sustainable cooling practices.



Needs assessment and lessons learned - Caribbean

- The workshop revealed critical gaps in technical expertise, policy development, and access to modern tools. Key recommendations included the creation of regional training programs on energy audits and psychrometric charts, the development of mobile apps for refrigerant tracking, and the dissemination of tailored guidelines for policymakers. Participants emphasized the importance of accessible resources to empower stakeholders and advance energy efficiency efforts across the region.
- Presentations from Trinidad and Tobago, Saint Lucia, and Barbados emphasized the progress made in adopting energy-efficient cooling technologies. Trinidad and Tobago showcased district cooling pilot projects that promise to reduce energy consumption by 30–40%. Barbados highlighted its successful implementation of MEPS, a policy framework that aligns energy efficiency with Kigali Amendment goals. Meanwhile, Grenada shared its green public procurement initiatives, illustrating how government policies can drive market demand for sustainable cooling technologies.
- The Caribbean's pioneering efforts in sustainable cooling and RAC systems innovations were observed during the workshop. Barbados' National Cooling Strategy emerged as a comprehensive policy framework aligning energy efficiency with Kigali's goals. Other innovative projects, such as photovoltaic-powered air conditioning units, showcased the potential of integrating renewable energy with advanced cooling technologies. Community-focused initiatives also played a pivotal role, raising awareness about energy efficiency benefits and fostering behavioural change.
- Collaborative discussions emphasized the need for stronger coordination between NOOs and NEEPs. Key barriers such as limited capacity, inadequate training, and financial constraints were addressed, leading to better aligning national and regional policies.
- Insights from the Organization of Eastern Caribbean States (OECS) and the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) emphasized the economic and environmental benefits of energy efficiency measures. The importance of incentive-based mechanisms and transparent regulatory frameworks was highlighted as essential for encouraging adoption and driving market transformation. Participants also explored global energy efficiency initiatives,

advocating for a regional approach that fosters cooperation and consistency across Caribbean nations.

- Existing regional policies and standards in the RAC sector were reviewed, with discussions focusing on overcoming barriers to national implementation. Enhancing national capacities and raising public awareness were identified as key priorities to ensure better alignment with regional energy efficiency goals. Participants shared successful projects that integrated energy efficiency and refrigeration technologies, showcasing innovative solutions that could be scaled or replicated across the region.

Summary of key outcomes - Caribbean

- Established cooperation between NOOs and NEEPs in the Caribbean region, and enhanced awareness of integrating energy efficiency into ozone protection efforts within the Montreal Protocol framework.
- Documented key barriers including limited institutional capacity, inadequate training, financial constraints, and regulatory gaps.
- Breakout sessions fostered a rich exchange of ideas, enabling participants to craft practical solutions tailored to the Caribbean's unique challenges. Expert-led discussions introduced participants to emerging trends such as "Cooling as a Service," which shifts financial burdens from consumers to service providers, and the integration of renewable energy into RAC technologies.
- Showcased successful projects integrating refrigeration and energy efficiency considerations from different countries in the region.
- Increased understanding of funding opportunities through the Multilateral Fund and other sources.
- Developed specific recommendations including terminology clarification between sectors, practical training on energy calculations, and increasing workshop frequency.
- Tools and resources provided by UNEP's United for Efficiency (U4E) initiative were introduced, offering practical support to implement sustainable refrigeration technologies. These resources, combined with enhanced collaboration and innovative financing, create a pathway for the Caribbean to lead in sustainable cooling practices.

Recommendations and future directions - Caribbean

- Participants emphasized the importance of a unified Caribbean Cooling Action Plan to harmonize policies, align standards, and pool resources. Expanding the Caribbean Appliance Database to include benchmarks for energy efficiency and refrigerant usage was also identified as a priority.
- The establishment of regional training hubs was proposed to provide specialized education for RAC technicians, policymakers, and business leaders. Modular training programs focused on low-GWP refrigerants and advanced technologies could ensure a more skilled and informed workforce.
- Innovative models like "Cooling as a Service" were highlighted as transformative approaches to reducing financial barriers. Participants also emphasized the need to leverage international funding mechanisms, including the Multilateral Fund and the Green Climate Fund, to support large-scale implementation of energy-efficient solutions.
- Public-private collaboration was recognized as a cornerstone for sustainable cooling initiatives. Transparent regulatory frameworks and incentives for private sector investment were recommended to drive the adoption of advanced RAC technologies across the region.

EUROPE AND CENTRAL ASIA AND WEST ASIA

Europe and Central Asia (ECA) and West Asia Networks Joint Twinning Workshop, 25-26 September 2023, Amman, Jordan

Context - ECA and West Asia

Europe and Central Asia (ECA): The ECA region encompasses a diverse set of countries, from developed economies with advanced energy efficiency frameworks to transitioning economies with varying technical capacities. Climatically, the region experiences a broad range of temperatures, creating a dual demand for heating and cooling solutions. These climatic extremes drive significant energy consumption in residential and commercial sectors, underscoring the need for sustainable and energy-efficient technologies.



West Asia: West Asia is identified by its dry climate and extreme heat, with cooling needs dominating energy consumption patterns. High temperatures create a critical reliance on air conditioning, particularly in urban centres and Gulf Cooperation Council (GCC) countries. This dependency has made the region one of the highest consumers of energy for cooling per capita globally, contributing significantly to greenhouse gas emissions.



Needs assessment and lessons learned – ECA

The needs assessment for the ECA network highlighted the region's diverse economic and technical capacities, reflecting significant disparities in infrastructure and national policies. While some countries, such as Turkey, have made substantial progress with robust frameworks like MEPS and energy labelling systems, others face challenges in aligning with international energy efficiency benchmarks. Countries in transition are particularly hindered by aging infrastructure, limited technical capacity, and inconsistent consumer awareness. Key findings:

- While countries like Turkey and Georgia have adopted energy efficiency regulations, many countries lack comprehensive policies governing low-GWP refrigerants and energy-efficient technologies.
- A shortage of trained RAC technicians proficient in new refrigerants and advanced systems limits effective implementation. This gap is evident in countries with older infrastructure, where technicians often lack the skills to retrofit or manage modern systems.
- Widespread use of aging cooling equipment delays the transition to sustainable technologies, increasing energy consumption and greenhouse gas emissions.
- Consumers and businesses are often unaware of the economic and environmental benefits of energy efficiency, slowing the adoption of advanced technologies.
- Aligning MEPS across the region can create a consistent market framework, encouraging the adoption of energy-efficient products/ systems and reducing trade barriers.

- Training technicians and policymakers are critical to bridging gaps in technical expertise and ensuring successful policy implementation. For example, Georgia's energy efficiency policy showcases how training programs enhance stakeholder capabilities.
- Leveraging collaborations between governments and private sectors, as seen in Turkey, can expedite the deployment of advanced cooling technologies.

Needs assessment and lessons learned – West Asia

The needs assessment in West Asia highlighted the region's high dependency on energy-intensive cooling systems driven by its dry climate and extreme temperatures. These climatic conditions, combined with economic differences and energy subsidies, add to the challenges in adopting sustainable cooling solutions. High cooling demand is further hindered by limited regulatory enforcement and financial barriers. Key Findings:

- Subsidized electricity prices in many West Asian countries disincentivize energy-efficient practices, making sustainable cooling technologies less appealing.
- The high upfront costs of advanced RAC systems and limited access to financing mechanisms hinder widespread adoption. Countries like Oman emphasized the need for accessible funding models during the workshop.
- Although green building codes and energy policies exist in some countries, enforcement and compliance mechanisms remain insufficient.
- The workshop revealed a critical need to involve broader stakeholder groups, such as retailers, private sector entities, and end-users, to cultivate a culture of energy efficiency.
- Expanding campaigns that target consumers and businesses can accelerate behavioural shifts toward energy-efficient practices.
- Harmonizing MEPS across GCC countries offers a pathway to create unified markets and economies of scale. This approach has been effective in promoting efficiency within the Gulf Cooperation Council (GCC).
- Cooling-as-a-service and similar financing solutions could address financial barriers, enabling broader adoption of sustainable technologies.

Shared lessons and opportunities - ECA and West Asia

- Both networks emphasized the integration of energy efficiency into national cooling policies as essential to achieving sustainable development goals. Tailored training programs emerged as a shared priority, with a focus on equipping technicians and policymakers with the skills needed to implement advanced systems and enforce regulations effectively. The stakeholder mapping exercises conducted during the workshop revealed significant untapped potential in engaging the private sector and underrepresented actors. Collaborative efforts between regional networks, such as knowledge-sharing initiatives, can amplify the best practices and accelerate policy implementation.
- Alignment with international frameworks like the Paris Agreement and Sustainable Development Goals (SDGs) remains a central theme. By harmonizing policies, strengthening capacity, and leveraging financial innovations, the ECA and West Asia networks are well-positioned to drive progress toward the Kigali Amendment's objectives and a sustainable cooling future.

Summary of key outcomes - ECA and West Asia

- Cross-regional collaboration between ECA and West Asia networks was strengthened, fostering knowledge exchange on successful policies, technologies, and financial mechanisms.
- National Cooling Action Plans were highlighted as a tool to integrate sustainable cooling into broader climate action frameworks, aligning with the Paris Agreement and multiple SDGs.
- Participants were introduced to advanced technologies, including low-GWP refrigerants, ventilation systems, and integrated building-HVAC solutions.
- The workshop encouraged public-private partnerships to address market barriers and promote sustainable practices.
- Participants explored financing opportunities through voluntary carbon markets, and other international funding sources to address the high upfront costs of energy-efficient systems, including leveraging carbon trading and incentives to influence market dynamics.
- Participants valued the interactive formats and technical content but suggested extending the workshop duration for deeper discussions.
- Future workshops were recommended to focus on technical advancements, and case studies to enhance practical learning.

Recommendations and future direction - ECA and West Asia Networks

In terms of policy development:

- Accelerate the harmonization of MEPS and energy labelling across regions to create unified markets for energy-efficient technologies.
- Ensure integration of energy efficiency considerations into national Montreal Protocol compliance frameworks and National Cooling Action Plans (NCAPs).
- Develop and enforce comprehensive regulatory frameworks to address refrigerant management, including leakage prevention and low-GWP refrigerant adoption.
- Capacity Building:
 - Expand training programs for RAC technicians to reduce refrigerant leaks, improve servicing practices, and enhance energy efficiency in systems.
 - Strengthen capacity-building initiatives for policymakers, focusing on linking energy efficiency with Montreal Protocol objectives
 - Increase education and training opportunities for investors and design engineers to incorporate energy-efficient technologies into projects.

In terms of stakeholder engagement:

- Broaden stakeholder engagement to include underrepresented groups such as retailers, private-sector entities, and community organizations.
- Foster partnerships between governments, private sectors, and international organizations to drive collaborative solutions.
- Regularly engage stakeholders through workshops, forums, and public awareness campaigns to enhance understanding and adoption of energy-efficient technologies.
- Financial Mechanisms:
 - Develop financing strategies, including voluntary carbon markets to address high upfront costs for energy-efficient systems.

- Explore incentives, such as subsidies and tax benefits, to promote the adoption of low-GWP and energy-efficient cooling technologies.
- Facilitate access to international funding sources, such as the Multilateral Fund and the Green Climate Fund, for energy efficiency projects.

In terms of technical advancements:

- Encourage the adoption of alternative refrigerants like CO₂ and natural solutions, with adequate preparation through training and certification programs.
- Promote ventilation products and systems as part of energy efficiency standards and regulations.
- Strengthen product certification processes to ensure quality control and build consumer trust in energy-efficient appliances.

Future workshop and research priorities:

- Extend the duration of future workshops to allow for deeper discussions and technical sessions.
- Focus future events on climate finance, practical case studies, and advancements in green technologies.
- Increase collaboration between regions to share best practices and successful models for policy implementation and technology adoption.

FRANCOPHONE AFRICA

Francophone Africa Network Twinning Meeting, 10-11 October 2024, Tunis, Tunisia

Context - Francophone Africa

The Francophone Africa region faces significant opportunities and challenges in its efforts to implement sustainable cooling solutions in alignment with the Kigali Amendment. Rising temperatures, driven by climate change, and rapid urbanization are increasing the demand for refrigeration and air conditioning (RAC) technologies. This growing need for cooling places a heavy burden on energy systems, which in many countries are already under strain due to limited infrastructure, unreliable access, and high operational costs. The region encounters persistent challenges that cause difficulties in its transition to sustainable cooling. Institutional frameworks in many countries are fragmented, leading to uncoordinated efforts between environmental, energy, and financial stakeholders. A shortage of skilled professionals capable of installing, operating, and maintaining these advanced systems further delays progress and increases reliance on outdated and inefficient technologies.



Needs assessment and lessons learned - Francophone Africa

- Across multiple countries, the fragmentation of responsibilities among ministries of environment, energy, trade, and finance has led to duplicated efforts and missed opportunities in cooling sector

governance. To address this challenge, several countries have developed effective models of institutional integration that offer valuable lessons for the broader region. Nigeria, Niger, and Egypt have successfully established inter-institutional technical committees for cooling that bring together diverse stakeholders under a unified framework. Niger's approach of formally including energy efficiency authorities in ozone committees has proven particularly effective in streamlining policy development and reducing redundancies. These collaborative structures have enabled the harmonization of policies, including the successful implementation of MEPS and anti-dumping measures. These bodies, comprising representatives from key ministries alongside stakeholders from academia, trade associations, and the private sector, can effectively coordinate policy development, national cooling action plans, and funding applications. Regular meetings, data-sharing platforms, and targeted capacity-building for task force members were identified as essential elements for ensuring accountability and driving meaningful change. Many participants expressed interest in UNEP's support for broader regional collaboration and knowledge-sharing to replicate these successful coordination models.

- Participants emphasized the need for national communication campaigns, regulatory measures to phase out high-GWP equipment, capacity building for technicians, and the development of national action plans. Participants expressed a clear need for harmonized communication strategies to promote awareness of energy efficiency and Kigali Amendment goals. Support from UNEP and other implementing agencies was sought to develop and implement these strategies effectively. Recognition of the importance of strategic communication and a commitment to work toward unified messaging across countries.
- Despite the success of targeted campaigns, such as the Dumping on Africa initiative, many participants pointed out the lack of consistent messaging to stakeholders. Francophone countries, in particular, stressed the need for communication materials in French, underscoring a linguistic barrier in accessing essential resources. Cameroon and Sierra Leone provided examples of innovative approaches, including solar-powered cooling solutions for vaccines, which serve as a case study for effective communication and implementation.
- Training for technicians, awareness-raising programmes, and skill development for policy implementation emerged as key areas requiring investment. Tunisia and Egypt presented projects to upgrade energy efficiency testing labs under Decision 91/65, but funding constraints limited their impact. Participants also emphasized the importance of technician training in proper refrigerant handling and energy-efficient servicing, with examples from Nigeria showcasing national associations filling the gap by providing tools and training to local technicians.
- Existing resources, such as U4E model regulations and the Dumping on Africa brochure, were shared during the workshop. However, participants highlighted the need for additional localized resources, particularly in French. Success stories from Senegal and Ghana, where MEPS have been effectively implemented, were shared, but further examples from across the region were requested to enhance learning and adoption.
- Examples from Cameroon highlighted innovative building solutions, such as insulating with mud bricks and using white-painted roofs, which reduce cooling loads and energy consumption. Participants emphasized the need for efficient design, low-GWP refrigerants, and maintenance practices to address the sector's growing impact.
- As regional challenges, the participants identified illegal trade, non-compliance with regulations, and the lack of energy efficiency awareness in sectors such as building design as significant

barriers. While Rwanda has made strides with MEPS and labelling systems, regional coordination and enforcement mechanisms remain weak. Many countries lack dedicated institutional capacity, such as specialized agencies, to oversee and implement EE initiatives effectively.

- Demonstration projects were highlighted as essential for introducing innovative technologies and building local capacity. However, participants noted that such projects often face funding limitations and administrative scrutiny. Regional centres of excellence, such as those proposed in Tunisia and Egypt, could play a vital role in scaling up these initiatives.
- Participants discussed the utility of tools such as the MEPSY calculator, which models the climate impacts of energy policies, and the Energy Efficiency Hub, which promotes collaboration on EE practices. However, the need for more localized training on tool usage was emphasized.
 - Voluntary EE agreements, such as those between South African industries and the government, have proven effective in achieving energy savings targets.
 - Green public procurement policies, as adopted in Kenya, demonstrate the potential for governments to lead by example in prioritizing energy-efficient appliances.
 - Sharing success stories, such as the adoption of solar cooling solutions in Sierra Leone, inspires regional collaboration and adaptation.
 - Monitoring and evaluation systems, when implemented effectively, drive innovation and foster investment in EE initiatives.
- Cameroon and Sierra Leone have demonstrated innovative approaches, including solar refrigeration and natural building materials, to address these challenges.
- Decisions such as 91/65 and XXVIII/2 were discussed as frameworks for integrating EE into the HFC phase-down process. Participants highlighted the potential for combined reductions in direct and indirect emissions through systemic approaches that prioritize building design, efficient technologies, and regulatory measures.
- Participants cited a lack of consumer awareness and weak enforcement of regulations as significant obstacles. Consumer education campaigns, financial incentives, and stricter regulations, such as banning inefficient imports, were identified as critical solutions.
- The workshop emphasized the importance of having ready-to-implement projects to mobilize additional resources. Many African countries were found to be missing out on funding opportunities due to a lack of project preparedness. A renewed focus on creating project portfolios to secure additional resources for energy efficiency initiatives.

Summary of key outcomes - Francophone Africa

- The workshop provided a unique space for interaction between NOUs, EE focal points, and financial focal points. Many participants from the same country had never met or discussed their roles and responsibilities before the workshop. Through the “Building Bridges” breakout session, participants gained a better understanding of their national counterparts’ responsibilities and achievements. They also exchanged best practices with peers from other countries. This opened new communication channels within countries and established cross-border networks, fostering collaboration at multiple levels.
- Participants were introduced to key aspects of the RACHP industry, including its technical, regulatory, and energy efficiency policies. Opportunities for improvement through the introduction of regulations and initiatives were explored in detail. Stakeholders were informed about industry-

specific energy efficiency practices and the importance of policy intervention. However, participants also expressed a need for further tools and training to deepen their understanding.

- The workshop intensified participants' understanding of the linkages between the Montreal Protocol, the Kigali Amendment, and energy efficiency. Discussions emphasized the operationalization of various decisions on energy efficiency taken by the Parties and the ongoing need for stakeholder commitment to maintain and enhance energy efficiency. This provided a broader awareness of the synergies between EE and the Montreal Protocol, reinforcing the importance of collaboration among all stakeholders.
- The Multilateral Fund provided an overview of funding decisions related to energy efficiency, highlighting the limited timeframe for taking advantage of certain initiatives. NOUs gained a clearer understanding of funding opportunities available under the MLF, while EE and financial focal points recognized the Protocol's serious commitment to energy efficiency initiatives.

Recommendations and future direction - Francophone Africa

The workshop provided a wealth of recommendations from two distinct perspectives: the participants and the workshop moderator. The moderator's recommendations were also included aiming to build long-term capacity and institutional frameworks:

- Participants emphasized the importance of fostering stronger collaboration among NOUs and energy policy makers focal points. Many highlighted the need for improved communication and coordination to mobilize funding effectively and ensure the alignment of efforts across government departments, that would include the following:
 - The creation of cross-departmental task forces to bring together ozone, energy, and finance stakeholders. These task forces would have clear mandates to coordinate activities, identify funding opportunities, and support project implementation.
 - Regular strategy meetings to align goals, track progress, and address challenges, ensuring a cohesive approach to energy efficiency initiatives.
- The need for large-scale, regionally coordinated projects was a recurring theme. While small pilot projects have been instrumental in demonstrating potential, participants stressed the importance of scaling up efforts to achieve a broader impact. Recommendations included:
- Designing and implementing regional infrastructure projects in refrigeration and energy efficiency, leveraging economic communities for shared resources.
- Developing comprehensive project portfolios to attract additional funding and align efforts with Kigali Implementation Plans (KIPs) and HCFC Phase-Out Management Plans (HPMPs).
- Participants identified a lack of strategic communication as a barrier to advancing energy efficiency goals. They called for harmonized communication strategies to educate and engage stakeholders at all levels. Suggestions included:
- Providing NOUs, EE focal points, and financial focal points with ready-to-use materials, such as templates, social media content, and infographics, to ensure consistent messaging.
- Organizing outreach programs/events, and campaigns to raise awareness about the benefits of energy efficiency and sustainable cooling technologies.

LATIN AMERICA AND CENTRAL AMERICA

Latin America and Central America Twinning Workshop, 1-2 August 2024, Santiago, Chile

Context - Latin America & Central America

Latin America faces different challenges in transitioning to sustainable cooling systems. Rising urbanization, climate-driven cooling demands, and economic disparities create a complex landscape for adopting energy-efficient and low-GWP technologies. Regulatory gaps, financial barriers, and limited technical capacity further complicate efforts to achieve Kigali Amendment targets. However, the region also presents significant opportunities, such as emerging innovations in the RAC sector, potential for renewable energy integration, and growing interest in harmonized policy frameworks. The workshop was specifically designed to address these regional conditions by fostering collaboration among stakeholders, sharing technical insights, and developing actionable strategies.



Needs assessment and lessons learned - Latin America & Central America

- A key priority identified by participants was the importance of raising awareness and conducting outreach programs. For instance, Colombia's Caribe Eficiente pilot project was highlighted as a successful model that combined awareness campaigns with financial incentives to promote energy-efficient appliances in low-income communities. Similarly, Chile's mandatory appliance labelling program has helped increase consumer awareness and encourage the adoption of energy-efficient products by providing clear and accessible information about energy consumption.
- Participants also emphasized the need for technical skills training to support the adoption of low-GWP refrigerants and advanced cooling technologies. The shortage of skilled technicians in the region was identified as a significant barrier to the effective deployment and maintenance of these systems. Brazil's large-scale technician certification initiatives under its Procel program were presented as a best practice, demonstrating how structured training programs can build workforce competence and enhance technical capacity.
- Policy development and implementation emerged as another critical priority. Many countries in the region face challenges in harmonizing energy efficiency policies with Kigali Amendment objectives. For example, Mexico's NOM-ENER standards were highlighted as a strong regulatory framework that aligns national policies with international goals, supporting energy efficiency and emissions reductions. However, participants noted the need for further updates to these standards to address emerging technologies and market dynamics. The discussions also emphasized the importance of inter-ministerial collaboration to align energy efficiency policies with ozone protection measures. Countries like Costa Rica and Nicaragua shared their experiences of institutional overlaps that often hinder policy coherence, emphasizing the value of coordinated policy frameworks.
- In the area of sustainable public procurement, participants recognized the role of governments in leading by example. Tools such as the U4E Green Public Procurement Guidelines for energy-efficient air conditioners and refrigerators were identified as valuable resources. These guidelines,

which provide technical specifications and cost-comparison analyses, have been successfully applied in countries like Chile to integrate energy efficiency into public procurement practices, ensuring that government purchases support sustainable cooling technologies.

- Participants also discussed the types of information materials and tools that would be most effective in addressing these priorities. Case studies and best practices from regional leaders like Brazil, Mexico, Chile, and Colombia were recognized as essential learning tools. These examples provide practical insights into how countries have successfully implemented energy efficiency initiatives in the RAC sector. For instance, Brazil's Procel program and Colombia's PROURE framework were highlighted for their comprehensive approaches to energy efficiency policy development and implementation.
- Technical guides and manuals were another key resource identified. U4E's guidelines on Green Public Procurement and sustainable cooling technologies were particularly valued for their ability to support governments in creating and enforcing technical requirements for energy-efficient products.
- Online platforms and databases were seen as critical for supporting data-driven decision-making. U4E's Product Registration System (PRS) was recognized for its ability to provide detailed product databases, enabling governments to monitor market trends, ensure compliance with national policies, and track environmental impacts. Uruguay's customs training programs, which incorporate elements of data tracking, were cited as a regional example of how such tools can enhance enforcement and market monitoring capabilities.
- The workshop also addressed several challenges that hinder the widespread adoption of energy-efficient technologies in the region. Data gaps and weak price signals were noted as significant barriers, limiting the ability to reflect the true cost of energy and its environmental impact. Costa Rica and Paraguay shared their struggles with limited data availability, which slow down the development of effective policies and programs. Participants emphasized the need for robust data collection systems, supported by tools like OLADE's sieLAC platform, which provides regional energy statistics and policy insights.
- Financial constraints were another recurring challenge, with many countries struggling to overcome the high upfront costs associated with energy-efficient technologies. The workshop highlighted innovative financing models, such as Colombia's tax incentives for energy-efficient appliances and the "cooling-as-a-service" model, as potential solutions. Participants also discussed the need for enhanced international support, with organizations like the Multilateral Fund and the IDB providing critical resources for regional projects.
- Other lessons learned during the workshop reinforced the importance of consumer awareness campaigns to drive demand for sustainable cooling solutions. Countries like Brazil and Chile shared examples of successful campaigns that increased public understanding of the benefits of energy-efficient products.

Summary of key outcomes - Latin America & Central America

- Participants gained insights into revising or establishing policies to reduce high-GWP refrigerants while promoting energy efficiency. For example, countries like Mexico and Chile, which shared their experiences with updating Minimum Energy Performance Standards (MEPS) and energy labelling, provided tangible illustrations of aligning national policies with Kigali goals. This knowledge-sharing inspired participants to explore tailored approaches for their own national

contexts, ensuring that energy efficiency becomes an integral part of their refrigerant transition strategies.

- The workshop facilitated vital discussions on funding mechanisms, creating opportunities for partnerships between countries and financial entities. For instance, participants explored innovative financing structures like "cooling as a service" models, which shift the financial burden from end-users to service providers, enabling broader adoption of energy-efficient cooling technologies.
- The workshop fostered robust inter-country and inter-agency collaboration, encouraging ongoing dialogue among key actors. Regular communication channels were established to maintain engagement across sectors, ensuring continued cooperation beyond the workshop. Examples like Uruguay's customs training program, which bridges gaps between government agencies and industry, were highlighted as models for fostering collaboration. By sharing success stories and case studies, such as Brazil's Procel program, participants were equipped with actionable examples of how to implement sustainable practices effectively. This collaborative spirit empowers countries to tackle challenges together, accelerating progress toward shared goals.
- The presentation of success stories and case studies during the workshop allowed participants to leverage collective expertise to promote sustainable refrigeration and air conditioning practices. For example, Chile's mandatory labelling for appliances and Colombia's Caribe Eficiente pilot program served as case studies that provided clear pathways for integrating energy efficiency into national policies. These examples not only showcased the feasibility of these initiatives but also provided a framework for replicating successes in other countries, fostering a culture of shared learning.
- A critical outcome of the workshop was the enhancement of participants' skills, networks, and institutional capacities. The interactive sessions helped identify potential inter-institutional initiatives, enabling stakeholders to collaborate more effectively on project execution and policy implementation.
- The workshop laid a foundation for continuous improvement, aligning national and regional efforts with the global goals of the Kigali Amendment. By equipping participants with the existing tools, knowledge, and partnerships needed to address challenges, the event ensured a forward-looking approach to sustainable cooling solutions.

Key recommendations and future direction - Latin America & Central America

- A key recommendation emphasized strengthening institutional cooperation at the national level. Many countries, including Colombia, Costa Rica, Nicaragua, and Mexico, reported challenges due to overlapping responsibilities between their NOUs and energy efficiency authorities. The workshop suggested creating inter-ministerial committees or working groups to align policy frameworks and ensure consistency in efforts to phase down high-GWP refrigerants while promoting energy efficiency.
- Another critical recommendation involved developing unified standards across the region. By promoting harmonized MEPS and energy labelling for refrigeration and air conditioning (RAC) equipment, countries could drive improvements in energy efficiency while ensuring market consistency.
- The workshop also identified financial constraints as a significant barrier to progress. To address this, participants recommended leveraging international support and adopting innovative financial models, such as subsidies or tax credits for efficient cooling systems.

- Capacity building emerged as another area of focus, with participants stressing the importance of training programs for technicians and customs officials. The need for technical competence in handling low-GWP refrigerants and maintaining efficient systems was seen as essential for achieving long-term sustainability. Uruguay's customs training programs and Brazil's large-scale technician certification initiatives were cited as best practices that could be expanded across the region to build workforce capacity.
- At the regional level, the workshop emphasized enhancing collaboration among countries to align policies, share knowledge, and foster mutual learning. OLADE and U4E were highlighted as valuable partners in this effort, offering tools, training, and data resources to support regional initiatives.
- Participants also called for robust data collection and policy support systems to track energy efficiency impacts and guide decision-making. Tools like OLADE's sieLAC platform were recommended for their ability to provide detailed energy statistics and greenhouse gas emissions data. This data-driven approach was seen as essential for designing effective policies and monitoring progress toward Kigali Amendment goals.
- The adoption of advanced cooling technologies was another priority, with recommendations to promote innovative solutions like IoT-enabled systems, variable-speed compressors, and CO₂-based refrigerants. Mexico's implementation of CO₂ systems in cold storage facilities offered a compelling example of how such technologies could deliver substantial energy efficiency gains while reducing emissions.
- Public awareness and engagement also featured prominently in the recommendations. Educating consumers about the long-term benefits of energy-efficient products was seen as critical for driving demand.
- The workshop concluded with a call for ongoing collaboration and dialogue among stakeholders to sustain progress. Participants recommended the formation of task forces comprising NOUs, energy policymakers, and financial focal points to ensure alignment and continuous improvement. Regular strategy meetings, joint action plans, and feedback mechanisms were suggested to track progress and address challenges dynamically.

PACIFIC ISLAND COUNTRIES

Pacific Islands Countries (PIC) Network Twinning Workshop, 5-6 February 2024, Rarotonga, Cook Islands

Context – PICs

The Pacific Islands face significant challenges due to their geographic isolation, which leads to high transportation costs and logistical barriers to importing energy-efficient technologies. Small, fragmented markets further complicate efforts to implement region-wide standards for sustainable cooling. The region's hot and humid climate drives extensive use of RAC systems, which accounts for a significant portion of energy consumption and places strain on the limited energy infrastructure. The workshop, therefore, emphasized the need for harmonized regional strategies to overcome these barriers and promote efficient cooling solutions.



Needs assessment and lessons learned – PICs

- Participants collectively agreed on the urgent need to enhance their capacity to monitor and report emissions, develop robust policies, raise awareness, and cultivate technical expertise for low-GWP alternatives. Monitoring and reporting were emphasized as the foundation for effective policymaking and compliance with international environmental commitments. For example, Fiji's successful MEPS and labelling program has become a benchmark, significantly reducing greenhouse gas emissions and energy costs by phasing out inefficient RAC equipment. However, countries like Kiribati and Tuvalu face challenges in implementing similar systems due to limited technical resources and expertise.
- Policy development also emerged as a critical priority. Samoa's integration of energy efficiency goals into its Energy Sector Plan 2023–2028 was highlighted as a leading example of aligning national policies with international objectives, including the Kigali Amendment. This strategic alignment has enabled Samoa to attract international funding and implement impactful energy efficiency measures. Conversely, smaller nations like Nauru struggle to draft and enforce policies due to resource constraints, underlining the need for regional cooperation and shared resources.
- Awareness-raising was another crucial need identified by participants. The Marshall Islands demonstrated the impact of targeted public campaigns in educating consumers about the benefits of energy-efficient appliances. These efforts have driven the adoption of compliant products and created a demand for sustainable technologies.
- Many countries reported a shortage of trained technicians to handle emerging refrigerant technologies. Tonga's collaborative workshops for RAC technicians, which provide hands-on training on installation and maintenance, were cited as a replicable model. Such programs equip technicians with the skills needed to optimize RAC systems in the Pacific's unique climatic conditions.
- To address these priorities, participants identified critical tools and resources:
 - The development of a comprehensive training manual, tailored to Pacific climates, was proposed. Such a manual would build on Tonga's successful training programs, offering step-by-step guidance on installation, maintenance, and repair, supported by regional case studies.
 - Pacific Appliance Database (PAD): Already utilized by countries like Samoa and the Solomon Islands, PAD has proven to be an invaluable tool for monitoring and regulating the energy efficiency of appliances. Samoa's innovative use of PAD to streamline product approvals and enforce MEPS was highlighted as a model for other PICs. Expanding the

database to include additional product categories and harmonized standards would enhance its regional impact.

- The U4E model regulation guidelines were recognized as critical resources for aligning national regulations with global standards. Fiji's application of these guidelines to support its green tourism policies exemplifies their practicality in driving compliance and fostering sustainable practices.
- One significant challenge is the absence of local testing laboratories in most Pacific countries, which increases the cost of product certification and limits the availability of energy-efficient appliances. Establishing a regional testing facility, accessible to all PICs, was proposed as a solution to reduce these barriers.
- Collaboration among government agencies was also a recurring theme. Samoa's success in integrating MEPS compliance into its customs procedures reflects effective interdepartmental cooperation. Similarly, Tonga's coordinated inspections of imported RAC equipment demonstrated the value of joint efforts in enforcement and monitoring.
- Policy harmonization remains a challenge, with countries like the Solomon Islands and Vanuatu reporting difficulties in aligning local regulations with international commitments. Sharing best practices, such as Palau's renewable energy roadmap, could help these nations craft more effective and cohesive policies.

Summary of key outcomes – PICs

- The workshop proved to be an essential platform for exchanging reduced practices among Pacific Island Countries (PICs). Tonga stood out as a model for integrating energy efficiency with ozone layer protection, showcasing its cohesive policy framework that links MEPS and Labelling (MEPSAL) with National Ozone Layer regulations. By enhancing inter-departmental collaboration and running joint awareness campaigns on management, Tonga highlighted the tangible benefits of an integrated approach. This collaborative model set a benchmark for other PICs to emulate, fostering a sense of shared purpose and mutual learning across the region.
- The workshop emphasized the development of tailored Energy Efficiency Plans for RAC appliances and recommended regional assessments to refine legislative frameworks, ensuring alignment with global energy standards.
- The Pacific Appliance Database (PAD) emerged as a pivotal tool, enabling countries like Samoa and Fiji to register energy-efficient products and enforce MEPS compliance. While countries demonstrated varying levels of engagement, partnerships with initiatives such as UNEP's United for Efficiency (U4E) proved instrumental in promoting best practices. However, challenges like maintaining knowledge transfer and increasing stakeholder awareness were noted. These insights provided a roadmap for enhancing future project implementations, with PAD serving as a cornerstone for regional cooperation.
- The technical sessions offered in-depth knowledge on enhancing RAC efficiency and managing leaks. These sessions emphasized the urgency of establishing stringent import standards for RAC equipment and emphasized the importance of regular energy audits. Practical training methods, combined with comprehensive capacity-building initiatives, were recommended to equip stakeholders with the skills needed to address energy consumption challenges.
- A significant outcome of the workshop was the exploration of funding opportunities to support the transition to energy-efficient, low-GWP RAC appliances. Realistic budgeting and coordinated

resource mobilization were identified as essential for avoiding duplication and ensuring the efficient use of funds. The workshop stressed the need for synergy among financial initiatives to maximize their impact and facilitate the adoption of sustainable technologies.

Practical Success Stories were introduced:

- Fiji demonstrated the transformative power of integrating international energy efficiency standards into national policies. By adopting PAD, Fiji reduced the importation of low-efficiency appliances, leading to a measurable decrease in national electricity consumption and greenhouse gas emissions. The financial savings for consumers further emphasized the economic benefits of these efforts.
- Samoa successfully incorporated HFC data into its Nationally Determined Contributions (NDCs) under the Paris Agreement. By utilizing PAD as a reliable source of data, Samoa presented a comprehensive plan to the international community, securing international funding for additional energy efficiency projects. This case highlighted the importance of aligning national systems with global climate reporting frameworks to attract support and enhance implementation.

Recommendations and future direction – PICs

- Advocating for updates to building codes to include energy-efficient and low-GWP RAC appliances is essential. For example, Fiji mandates Environmental Impact Assessments (EIA) for new tourism developments, ensuring compliance with energy efficiency standards. This approach not only reduces energy demand but also mitigates the long-term environmental impact of construction projects.
- Developing guidelines that prioritize energy-efficient RAC appliances in public procurement is vital. This ensures alignment with national sustainability goals and fosters international cooperation. Samoa's use of the Pacific Appliance Database (PAD) to regulate RAC imports exemplifies how procurement policies can drive compliance and sustainability.
- Countries with established energy regulations should adopt comprehensive plans for RAC appliances. These plans could include minimum efficiency standards, incentives for adopting energy-efficient models, and regular maintenance protocols. Fiji's green tourism policy is an excellent example of targeted strategies driving sectoral energy efficiency.
- Standardizing energy efficiency regulations across PICs, especially between South Pacific (aligned with Australian/New Zealand standards) and Northern Pacific (aligned with U.S. standards), is critical. This harmonization will facilitate smoother trade and improve compliance. Regional collaboration is necessary to address the high costs and logistical challenges of laboratory testing.
- PICs should conduct energy and refrigerant leakage assessments to inform legislative improvements. Countries such as the Marshall Islands demonstrated success by conducting energy audits of government facilities, leading to a 50% reduction in energy consumption after adopting inverter-style air conditioners.
- Programs must equip technicians with skills in leak detection, proper refrigerant handling, and energy-efficient RAC maintenance. Tonga's annual training for RAC technicians is a replicable model that underscores the importance of practical, hands-on instruction.
- Raising public awareness about the benefits of energy-efficient appliances and the importance of regular maintenance can lead to significant energy savings. Samoa's outreach campaigns targeting consumers and retailers have successfully improved compliance and market transformation.

- The creation of a Regional PIC RAC/NOO/NEO Professional Network would facilitate ongoing knowledge sharing and collaboration among stakeholders, ensuring that best practices are disseminated and adopted across the region.
- PICs can utilize funding opportunities under Decision 89/6, enabling low-volume consuming countries to secure up to \$100,000 for energy efficiency enhancements in their HCFC Phase-out Management Plans. This funding can support pilot projects for energy-efficient refrigeration and capacity-building initiatives.
- Sharing success stories, such as Fiji's significant energy savings through MEPSAL, can demonstrate the tangible benefits of energy efficiency initiatives. Case studies serve as powerful tools for advocacy, helping to persuade policymakers and businesses to adopt sustainable practices.
- Integrating hydrofluorocarbon (HFC) management into Nationally Determined Contributions (NDCs) under the Paris Agreement provides a comprehensive framework for climate action. Samoa's success in aligning its RAC data with global climate reporting showcases the benefits of this approach.
- Encouraging governments and businesses to employ energy auditors for thorough assessments can identify inefficiencies and propose upgrades. Tonga and the Marshall Islands have demonstrated the cost savings and environmental benefits achievable through energy audits and subsequent technological upgrades.

SOUTH ASIA

South Asia Network Twinning Workshop, 20-21 May 2024, Guangzhou, China

Context – South Asia

South Asia, characterized by its rapid urbanization, growing economies, and increasing cooling demands, faces critical challenges in transitioning to energy-efficient and climate-friendly cooling solutions. The workshop addressed these challenges by focusing on strategies such as implementing MEPS, and promoting the adoption of low-GWP refrigerants. Participants gained insights into overcoming barriers like limited financial resources, insufficient technical capacity, and outdated technologies. By equipping policymakers with the existing tools and frameworks needed to modernize cooling infrastructure, the workshop emphasized the importance of regional collaboration in achieving sustainable cooling solutions while meeting international climate commitments.



Workshop needs assessment and lessons learned – South Asia

- Public awareness campaigns emerged as a priority, aiming to educate consumers and stakeholders about the benefits of energy-efficient and climate-friendly cooling. Alongside this, specialized training for government officials, policymakers, and RAC technicians was highlighted as a cornerstone for developing technical and institutional capabilities.

- A recurring theme in the discussions was the need for appliance labelling systems and robust standards enforcement mechanisms. Participants noted that labelling could not only guide consumers toward energy-efficient choices but also create market incentives for manufacturers to innovate. Similarly, enforcing MEPS was recognized as a vital step in transforming markets and phasing out inefficient technologies.
- The workshop also identified specific tools and resources required to address these needs. These included accessible online training courses, such as UNEP-ASHRAE's Refrigerant Literacy and Energy Efficiency Literacy eLearning courses, which provide policymakers with foundational knowledge in energy-efficient cooling. For technicians, a modular RAC training curriculum was deemed essential to equip them with skills in handling low-GWP refrigerants and maintaining energy-efficient systems. Participants also called for energy audit briefing sheets and instructional videos to promote the adoption of energy audits and effective maintenance practices. These resources were seen as crucial for empowering technicians to advocate for energy efficiency and educate end-users about long-term cost savings.
- Financial constraints emerged as the most significant obstacle, with high initial costs of energy-efficient equipment limiting their adoption. Access to funding mechanisms was seen as inadequate, leaving countries reliant on traditional technologies that are both inefficient and environmentally harmful.
- Another key challenge was the shortage of trained professionals. The lack of technical expertise in managing advanced RAC technologies has created a gap in implementation capacity. Additionally, weak policy frameworks and inconsistent enforcement of MEPS have allowed inefficient appliances to dominate the market. These issues were compounded by low consumer awareness, which limits demand for energy-efficient solutions.
- To address these barriers, participants discussed practical strategies. Developing integrated policies, such as National Cooling Action Plans (NCAPs), was highlighted as a way to align RAC goals with broader energy efficiency and climate commitments. Collaboration between energy and environmental ministries was seen as crucial for ensuring a cohesive policy approach. The importance of engaging diverse stakeholders, including training institutions, private sector players, and consumer advocacy groups, was also emphasized as a means to foster a supportive ecosystem for energy-efficient technologies.
- Incentive mechanisms, such as public procurement programs and innovative business models like "cooling as a service," were identified as effective tools for reducing adoption barriers. These strategies aim to lower upfront costs and create demand for efficient products, paving the way for market transformation.
- The importance of ongoing communication emerged as a recurring theme. Regular updates through newsletters, case studies, and online platforms were recommended to maintain momentum and facilitate knowledge sharing among regional stakeholders.

Summary of key outcomes – South Asia

- Participants gained a deeper understanding of energy-efficient technologies and their applications in RAC systems. Discussions showcased the transformative potential of the Near-Zero Cooling Pathway, highlighting its ability to reduce global emissions by 94% compared to 2022 levels.
- Participants were introduced to practical methods for improving the efficiency of RAC systems over their lifecycle. Energy audits were showcased as a vital tool for identifying inefficiencies and

unlocking cost-saving opportunities. A pilot project in Malaysia demonstrated how implementing energy audit recommendations reduced energy consumption in commercial buildings by 30%. Additionally, tools like temperature and humidity data loggers were highlighted for monitoring HVAC system performance, with Thailand's deployment of these tools in large office complexes serving as a successful example. Proper refrigerant leak management was also emphasized, with Singapore's technician training programs for water-cooled chillers illustrating how effective maintenance practices can mitigate leaks and improve system efficiency.

- Participants examined how transitioning to high-efficiency cooling systems could double the climate mitigation benefits of the HFC phase-down. For instance, Singapore's integration of GWP values into MEPS and labelling systems demonstrated how energy efficiency and refrigerant management could be addressed cohesively. Participants also explored strategies to promote consumer adoption of efficient appliances, drawing inspiration from Thailand's star rating program, which highlights cost savings and environmental benefits.
- The importance of robust policies to drive market transformation was a recurring theme. Presentations highlighted how MEPS and labelling policies can prevent the import of inefficient RAC equipment while guiding consumer behaviour. Singapore's streamlined registration process for MEPS and refrigerant restrictions served as a best practice example, demonstrating the value of regulatory alignment. Participants also discussed the potential of regional collaboration to harmonize standards, adopting UNEP U4E Model Regulations to ensure consistency with global best practices.
- Financial constraints were identified as a significant barrier to adopting energy-efficient cooling technologies. The workshop introduced innovative approaches to address these challenges, such as public procurement programs. The Philippines' bulk procurement initiatives, which have reduced costs for energy-efficient air conditioners in government facilities, were cited as a successful model. Incentive schemes, like Singapore's subsidies for efficient appliances, showcased how financial support can make sustainable options accessible. The concept of "cooling as a service" was also discussed as a viable solution for low-income regions, allowing end-users to benefit from efficient cooling without upfront costs.
- Participants worked collaboratively to define stakeholder roles and identify opportunities for engagement. Using a Stakeholder Matrix, they mapped critical actors, including government ministries, manufacturers, retailers, training institutes, and consumer advocacy groups. Thailand's collaboration with the Electricity Generating Authority of Thailand (EGAT) to share efficiency data with policymakers provided a compelling example of public-private partnership. The matrix served as a tool to encourage ongoing dialogue and collaboration among diverse stakeholders.
- The workshop facilitated regional knowledge sharing, offering participants insights from successful initiatives across ASEAN. Malaysia's energy label tracking system demonstrated the potential of post-market data collection to evaluate program impacts, while Singapore's monitoring of online marketplaces, such as Shopee and Lazada, illustrated how compliance with MEPS and labelling requirements can be maintained. These exchanges inspired participants to explore regional initiatives, such as harmonizing standards and developing joint training programs for technicians.
- Participants were introduced to a variety of tools and resources to support Kigali Amendment objectives. Open-source Product Registration Systems (PRS) were presented as solutions for tracking appliance compliance, while resources like the Refrigerant Servicing and Best Practices

Manual were identified as vital for building technical capacity. These tools equip countries with the means to advance energy efficiency through informed policymaking and robust implementation.

Key recommendations and future direction - South Asia

- **Adopt a Multi-Solution Strategy:** The workshop emphasized the importance of integrating multiple approaches to achieve energy efficiency goals. No single intervention can suffice; instead, success relies on a combination of financial support, governmental coordination, stakeholder engagement, energy labelling, and technical training.
 - **Financing:** Participants highlighted the critical role of the Multilateral Fund and other international financing mechanisms as catalysts for private-sector investment. For example, projects in India that linked funding from the Global Environment Facility (GEF) to local cooling efficiency programs were cited as successful models.
 - **Governmental Coordination:** Collaboration between energy and environmental ministries was noted as vital. Countries like Bhutan showcased examples of integrating RAC policies across ministries to create cohesive energy efficiency plans.
 - **Energy Labelling and MEPS:** Implementing and enforcing MEPS and labelling programs was recommended to create market demand for efficient appliances. Countries like Sri Lanka demonstrated progress in labelling air conditioners, providing a model for other nations to emulate.
- **Develop National Policies on Sustainable Cooling Technologies:** National policies must be rooted in realistic, attainable goals and focus on integrating sustainable cooling solutions.
- **Integrated Systems Approach:** Policymakers were encouraged to adopt load reduction strategies, such as improving building insulation and utilizing passive cooling techniques. For instance, passive cooling designs in Nepal's building sector have reduced reliance on active air conditioning systems.
- **Improved MEPS and Labelling:** Participants were shown how MEPS and labelling, when updated regularly, can improve energy efficiency globally. Labelling programs in China have driven consumer demand for efficient appliances, reducing energy consumption significantly.
- **Technological Innovation:** Incorporating advanced technologies like inverter air conditioners and low-GWP refrigerants is essential. India's National Cooling Action Plan serves as an example, combining technology adoption with targeted training programs for technicians.
- **Foster Broad Stakeholder Engagement:** A recurring theme was the need for a multi-stakeholder approach to achieve Kigali Amendment goals. Energy efficiency is a complex issue requiring the active involvement of diverse actors.
- **Stakeholder Mapping:** Workshop activities encouraged countries to identify and engage engineers, architects, contractors, manufacturers, and others. Bhutan's collaboration with vocational training institutes to develop RAC-specific curricula exemplifies the value of broad engagement.
- **Inter-Sectoral Collaboration:** Participants from Bangladesh shared how their energy ministry worked with customs officials to streamline the import of compliant cooling technologies.
- **Leverage Energy Audit Tools:** Energy audits were recognized as a transformative tool to identify and implement efficiency measures in buildings and cooling systems.
- **Participants learned how audits can reduce utility costs, improve building performance, and increase property value.** For example, a pilot project in Maldives revealed that energy audits reduced air conditioning energy use by 25% in public buildings.

- Creating accessible guides and videos was recommended to train technicians and promote audits among end-users. Practical demonstrations during the workshop showcased how simplified tools could empower technicians to advocate for energy-efficient practices.
- Enhance MEPS and Energy Labelling Implementation: The role of MEPS and energy labelling was emphasized as a cornerstone of energy efficiency policies.
- Labelling programs can educate consumers while driving demand for efficient appliances. Thailand's star rating system for air conditioners, supported by public awareness campaigns, was presented as a model of success.
- Participants discussed the importance of updating MEPS and labelling systems to keep pace with technological advancements. Countries were encouraged to collaborate regionally to harmonize standards, as seen in the ASEAN roadmap for energy-efficient appliances.
- Promote Knowledge Sharing Among Countries: The workshop stressed the value of collaboration and continuous learning across countries.
- Sharing success stories, such as India's efforts in aligning its National Cooling Action Plan with Kigali Amendment goals, provided practical insights for other participants.
- Establishing an online resource library was recommended to facilitate knowledge sharing and provide access to templates, tools, and guides.
- Regular surveys and evaluations were proposed to improve communication and foster a dynamic exchange of ideas.

SOUTHEAST ASIA

Southeast Asia Network Twinning Workshop, 20-21 May 2024, Guangzhou, China

Context - Southeast Asia

Southeast Asia, facing rising cooling demands due to its tropical climate, urbanization, and economic growth, struggles to align these needs with climate goals. Key challenges include fragmented policies, financing gaps, technical barriers, and outdated infrastructure. The event emphasized empowering policymakers with data, funding tools, and capacity-building while leveraging ASEAN collaboration to harmonize standards and share solutions.



Needs assessment and lessons learned - Southeast Asia

- A key challenge identified was the lack of sufficient awareness among policymakers, regulators, and consumers regarding the benefits of energy-efficient and low-GWP technologies. Action suggested: Develop and sustain tailored information materials in SEA countries to educate stakeholders about emerging technologies, regulations, and the benefits of sustainable cooling.
- Many countries lack structured frameworks to implement EE and refrigerant phase-down policies effectively. Action suggested: Adopt and adapt these guidelines in countries with limited or fragmented regulatory systems to create cohesive frameworks that drive market transformation.

- Although countries like Singapore and the Philippines have successfully implemented low-GWP refrigerant policies and energy labelling programs, there is an absence of documented case studies and best practices. These are critical for guiding other countries on implementation and scaling. Action: Develop and disseminate case studies to share lessons learned, highlight successes, and provide actionable blueprints for similar initiatives across the region.
- Tools such as UNEP's U4E Product Registration System (PRS) and ASEAN's Regional Product Database were recognized as vital resources for countries without robust tracking mechanisms. These tools can standardize data collection and facilitate compliance monitoring.
- Policymakers highlighted a significant gap in the availability of accurate market data on RAC equipment. Current ad-hoc data collection efforts result in inconsistencies, delaying program development. The lack of Harmonized System (HS) codes for RAC equipment further complicates tracking imports and sales. Action suggested: Establish standardized protocols for data collection, engage Customs and industry stakeholders, and harmonize HS codes to streamline reporting and policymaking.
- The shortage of skilled technicians was identified as a critical barrier to achieving energy efficiency and safe refrigerant handling. Poor installation practices and mishandling of flammable low-GWP refrigerants significantly reduce system efficiency and pose safety risks. Action suggested: Implement mandatory training and certification programs, focusing on installation, maintenance, and safe refrigerant handling practices to build a competent workforce.
- High upfront costs of energy-efficient and low-GWP cooling solutions remain a significant barrier to adoption. Innovative models such as "cooling as a service" and targeted subsidies can help address cost concerns. Action suggested: Develop clear guidelines for accessing funding, create public procurement programs, and promote financial incentives to reduce adoption barriers.
- Policymakers often face delays due to inconsistent and incomplete market data. Without accurate insights into market trends, energy performance, and refrigerant use, program design becomes resource-intensive. Tools like the SIRIM energy label tracking system in Malaysia were highlighted as effective solutions to address this gap.
- Frequent staff rotations and fragmented responsibilities across government agencies disrupt continuity in policy implementation. The workshop emphasized the importance of Memorandums of Understanding (MOUs) between ministries and regular interagency dialogue to ensure smoother collaboration.
- The lack of trained RAC technicians leads to suboptimal system performance and safety risks, particularly with flammable refrigerants. Programs in Singapore and the Philippines that mandate technician training for advanced systems were presented as models for regional adoption.
- The growing popularity of online platforms like Shopee and Lazada for RAC equipment sales poses unique challenges. Issues such as counterfeit energy labels and unregistered imports were identified as major concerns. Singapore's efforts in monitoring online and retail sales for compliance with MEPS and labeling requirements offered a practical example.

Summary of key outcomes - Southeast Asia

- The workshop highlighted the importance of robust product registration systems (PRS) for ensuring compliance with MEPS and labeling requirements. While countries like Malaysia and Singapore have established PRS frameworks, others, such as Cambodia and Lao PDR, are in the early stages of development. The U4E-PRS prototype was introduced as a valuable resource for countries

lacking national systems, offering a cost-effective solution to standardize data collection and monitoring.

- For countries without testing facilities, Mutual Recognition Agreements (MRAs) were identified as a mechanism to facilitate conformity assessments using accredited laboratories. These initiatives, combined with UNEP U4E's tools, can streamline implementation and ensure regional consistency in policy enforcement.
- Effective monitoring of RAC equipment after market entry was another focus of the workshop. Participants recognized the dynamic nature of market data and the challenges in collecting detailed information on sales, energy performance, and refrigerants. The lack of specific Harmonized System (HS) codes for RAC equipment further complicates data collection.
- Country presentations highlighted best practices in post-market monitoring. For instance, Singapore's regular inspections of physical retail and online platforms, combined with stringent MEPS and labeling enforcement, provide a robust model for ensuring compliance. Malaysia's energy label tracking system, operated by SIRIM, demonstrated the potential of leveraging market data to evaluate program impacts and guide policy adjustments.
- The workshop emphasized various mechanisms to accelerate the adoption of energy-efficient and low-GWP RAC technologies. Training and certification programs for technicians were identified as critical for ensuring the proper installation and maintenance of advanced systems. Participants discussed the integration of efficiency and refrigerant requirements into building energy codes, as well as the development of green procurement policies for government and private sector organizations.
- Singapore's mandatory technician training programs for water-cooled chillers and Thailand's studies on high-efficiency mobile air conditioning systems exemplify how targeted initiatives can promote sustainable practices. These efforts highlight the importance of building technical capacity across all levels of the supply chain.
- The workshop shed light on financial barriers to adopting energy-efficient technologies and explored solutions to overcome these challenges. Participants learned about fiscal incentives, such as subsidies and tax benefits, and innovative models like "cooling as a service," which allows end-users to access efficient cooling solutions without upfront costs.
- Experts highlighted the role of financial assistance from the Multilateral Fund and other international funding sources in unlocking private-sector investments. These resources can serve as seed funding to create favorable conditions for scaling energy-efficient and low-GWP technologies.
- Case studies presented by Singapore, Malaysia, and Thailand provided valuable insights into the implementation of MEPS, labeling, and refrigerant phase-down efforts:
 - Singapore demonstrated the benefits of integrating MEPS and refrigerant restrictions into a unified regulatory framework, supported by stakeholder engagement and grace periods for compliance.
 - Malaysia showcased its e-permit system, which simplifies import processes for RAC equipment while addressing counterfeit labeling and non-compliance issues through interagency coordination.
 - Thailand highlighted the potential of high-efficiency mobile air conditioning systems to reduce CO₂ emissions, offering a pathway for other AMS to explore.

Key recommendations and future direction - Southeast Asia

- The workshop highlighted the importance of formal mechanisms, such as Memorandums of Understanding (MOUs), to institutionalize collaboration and foster a shared commitment among stakeholders. Training programs were also emphasized as a means to educate technicians, policymakers, and stakeholders about sustainable cooling practices, the benefits of energy efficiency, and the use of low-GWP refrigerants. By bridging institutional silos, countries can align their efforts and create a unified front for addressing Kigali Amendment objectives.
- The role of well-designed policies and financial strategies in transforming the RAC sector was a recurring theme. The implementation of MEPS and energy labelling systems can stimulate demand for efficient products, as seen in countries like Thailand, where labelling initiatives have successfully informed consumer choices.
- Public procurement policies were recommended as a powerful tool for setting an example in adopting energy-efficient technologies. Additionally, innovative financing models, such as "cooling as a service," were discussed as mechanisms to reduce the financial burden on end-users by eliminating upfront costs. Participants emphasized the need for an integrated approach that combines efficiency measures, refrigerant GWP considerations, and broader building energy efficiency practices.
- The financial complexity of the RAC sector calls for strategic funding approaches. The Multilateral Fund was identified as a critical resource for providing seed funding to unlock private-sector investments. Workshop discussions also highlighted the importance of raising awareness about available financial mechanisms, ensuring that stakeholders can effectively access and utilize these resources.
- By developing regional funding frameworks and promoting collaborative financing models, Southeast Asian countries can pool resources to tackle shared challenges. The availability of subsidies, tax benefits, and innovative financial schemes can encourage widespread adoption of energy-efficient and low-GWP technologies.
- The workshop encouraged countries to focus on passive cooling strategies, such as improved building designs and insulation, to reduce the need for active cooling. Proper sizing and optimization of cooling equipment were also emphasized as critical factors for enhancing system efficiency and reducing energy costs.
- Localized approaches tailored to the climatic and socioeconomic conditions of each country were deemed essential. By adopting these strategies, countries can achieve significant energy savings while meeting the growing demand for cooling.
- The workshop highlighted the transformative potential of inverter technologies, which offer greater energy efficiency and lower operating costs. However, their adoption is often influenced by cost-to-benefit considerations. End-user education on the long-term savings of such technologies can drive broader adoption.
- Participants also discussed the importance of adopting building energy codes that incorporate energy-efficient design principles. Conducting evaluations of daytime and nighttime cooling needs was recommended as a way to optimize equipment performance in residential and commercial buildings.
- Aligning national standards with international benchmarks is essential for fostering global competitiveness and ensuring the adoption of efficient technologies. While many Southeast Asian countries have harmonized their RAC standards with international guidelines, some have yet to

adopt the latest editions of these standards. The workshop urged countries to prioritize updates to standards like ISO 5151:2017 to stay aligned with technological advancements.

- Participants also stressed the importance of considering country-specific factors, such as climate conditions and safety requirements, when implementing MEPS. Strengthening standards can prevent the importation of low-efficiency appliances and ensure that markets are not saturated with outdated technologies.
- A reliable Product Registration System (PRS) is crucial for tracking and enforcing compliance with MEPS and labeling requirements. The UNEP U4E prototype PRS was introduced as a resource that can be adapted to meet national needs. For countries without testing facilities, Mutual Recognition Agreements (MRAs) were recommended as a way to accept testing and certification results from accredited laboratories in other ASEAN Member States (AMS).
- The workshop emphasized the importance of post-market surveillance to track energy performance and refrigerant usage. Specific Harmonized System (HS) codes were recommended to facilitate detailed tracking and reporting.
- Country presentations offered valuable insights into enforcement practices. For example, Singapore's regular checks of physical and online marketplaces have been instrumental in maintaining compliance with MEPS and labeling standards. Collaborative efforts with online marketplaces, such as Shopee and Lazada, were identified as opportunities to combat counterfeit labeling and unregistered imports.
- Awareness and education are fundamental to achieving sustainable cooling transitions. Public campaigns highlighting the benefits of energy-efficient and low-GWP technologies were recommended to build consumer trust and drive demand.
- The workshop further encouraged knowledge sharing among AMS, emphasizing the value of case studies and best practices in inspiring regional collaboration and innovation.

4. SHARED LESSONS LEARNED, ACHIEVEMENTS AND RECOMMENDATIONS

The Twinning Project provided technical assistance and capacity building to Article 5 countries that promoted global, regional and national cooperation to further the objectives of the Montreal Protocol's Kigali Amendment. This initiative has successfully helped countries align national and regional efforts to transition to energy-efficient, low-GWP refrigerants while simultaneously addressing climate challenges and promoting energy savings. The following consolidates the shared findings, challenges, and recommendations across all participating regions—Africa Anglophone, Caribbean, Francophone Africa, Latin and Central America, Pacific Islands, South Asia, Southeast Asia, and Europe & Central Asia, and West Asia.

Shared lessons learned and achievements

- ***Knowledge sharing emerged as a foundational achievement of the Twinning Project, emphasizing the critical importance of equipping stakeholders with the knowledge and tools needed to drive energy efficiency.*** Through structured workshops and interactive sessions, participants gained a deep understanding of the principles underlying energy-efficient RAC systems, low-GWP refrigerants, and policy frameworks for sustainable cooling solutions. The

project's emphasis on knowledge sharing also empowered stakeholders to address systemic gaps, enhance compliance with the Kigali Amendment, and integrate energy efficiency considerations into national strategies. the project created opportunities for governments to strengthen internal coordination, improve inter-agency collaboration, and foster more robust governance frameworks.

The diverse training approaches used across regions—ranging from expert-led discussions to practical toolkits—demonstrated the project's adaptability to meet the unique needs of stakeholders in different networks. The emphasis on tailored learning ensured that stakeholders were not only informed but also equipped with actionable solutions that could be implemented within their national contexts.

- ***Advancing Policy Integration: The Twinning Project has been instrumental in aligning national energy efficiency policies with Kigali Amendment objectives, emphasizing the need for cohesive policy frameworks that integrate MEPS, energy labelling, and National Cooling Action Plans (NCAPs).*** By bridging the gaps between refrigerant transition policies and broader climate strategies, the project established a roadmap for achieving sustainable cooling solutions.

Stakeholders were encouraged to adopt robust monitoring and compliance systems to ensure that policy frameworks are effectively enforced. The integration of data management practices into policymaking processes was identified as a transformative approach for tracking progress, identifying gaps, and refining strategies.

Additionally, the project highlighted the importance of embedding energy efficiency measures into broader national frameworks, such as climate action plans and sustainable development strategies. This alignment ensures that refrigerant transition objectives contribute to achieving global climate goals while addressing local environmental and economic priorities.

- ***Cross-Sectoral Collaboration and Regional Synergies: The Twinning Project's success is rooted in its ability to foster collaboration across sectors and regions. By bringing together NOOs, NEEPs, and FMFPs, the initiative created a platform for addressing shared challenges collectively.*** These collaborations bridged gaps between energy, climate, and environmental policy areas, enabling a unified approach to energy efficiency.

The project also emphasized the importance of engaging a broad spectrum of stakeholders, including private sector actors, civil society organizations, and academic institutions. These partnerships were critical for driving innovation, fostering inclusivity, and scaling the adoption of energy-efficient practices. Regional synergies further amplified these efforts, with countries working together to harmonize standards, share knowledge, and coordinate initiatives.

- ***A key focus of the Twinning Project was the promotion of advanced technologies that enhance energy efficiency and reduce environmental impact.*** The initiative introduced stakeholders to RAC systems, low-GWP refrigerants, and international standards that ensure the sustainable performance of cooling equipment.

The project emphasized the importance of adopting technologies that are not only energy-efficient but also compatible with international trade and environmental benchmarks. This dual focus on innovation and compliance helped stakeholders align their technological initiatives with global best practices while addressing local needs.

Additionally, the project emphasized the role of maintenance and servicing in sustaining energy efficiency. By promoting regular equipment maintenance, stakeholders were able to ensure that efficiency gains were preserved over time. This comprehensive approach to technology adoption highlighted the interconnectedness of innovation, policy, and capacity building in achieving long-term sustainability.

- ***Financial sustainability emerged as a critical theme in the Twinning Project, highlighting the role of funding mechanisms in overcoming cost barriers to energy-efficient technologies.*** Stakeholders were introduced to a range of international financing opportunities, including the Multilateral Fund and Green Climate Fund.

The project also emphasized the importance of building capacity to develop project proposals, enabling countries to access global funding more effectively. Innovative financial models, such as public-private partnerships, bulk procurement programs, and incentive schemes, were identified as key strategies for scaling adoption and ensuring affordability. By addressing financial barriers, the project laid the groundwork for accelerating the transition to sustainable cooling solutions while ensuring that these initiatives remain economically viable.

Shared challenges

- Insufficient financial resources emerged as a significant barrier to implementing energy efficiency initiatives. Limited budgets restricted the ability of countries to scale projects, conduct training programs, and invest in necessary infrastructure. The need for scalable, region-specific financial solutions was repeatedly highlighted as a priority.
- Although progress has been made in developing policies, enforcement remains a challenge. Weak regulatory frameworks, coupled with inconsistent monitoring systems, hinder the effectiveness of MEPS, energy labeling, and other policy measures. Strengthening regulatory capacity and ensuring robust enforcement mechanisms are essential for sustaining progress.
- The shortage of skilled technicians and trained personnel in the RAC sector was a recurring challenge. Many countries lack the human resources needed to maintain and operate energy-efficient systems, underscoring the need for expanded training programs and capacity-building initiatives.
- Low public awareness of energy-efficient technologies continues to impede progress. The lack of accessible information on the environmental and economic benefits of sustainable cooling discourages widespread adoption. Public education campaigns are needed to bridge this gap and drive demand for energy-efficient solutions.
- Unique geographic, economic, and climatic conditions across regions necessitate tailored approaches to policy and program implementation. These variations often complicate the adoption

of uniform strategies, requiring flexible and adaptive solutions to address local challenges effectively.

Common recommendations from the Twinning workshops

These recommendations emphasize the importance of integrating key policies, enhancing capacity-building, leveraging financial models, and fostering collaboration across sectors. Additionally, there is a critical need for the development of tailored knowledge tools, information materials, and resources that will equip stakeholders with the information they need to achieve these goals effectively:

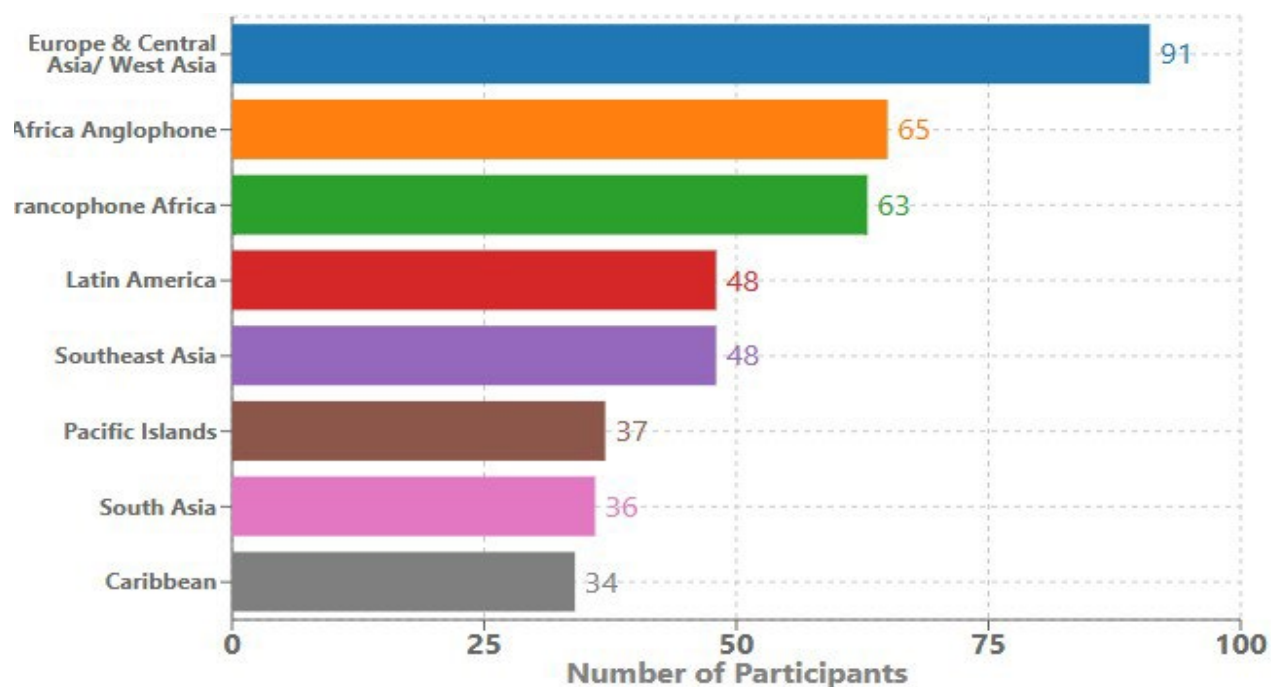
- Developing comprehensive policies that integrate MEPS, energy labeling, and climate strategies should be a priority. These frameworks must be supported by enforcement mechanisms, data-driven monitoring systems, and periodic evaluations to ensure sustained progress.
- Comprehensive training initiatives should target all stakeholders, from policymakers to technicians. Training should focus on practical skills, technical innovation, and policy implementation, ensuring that capacity gaps are addressed holistically.
- Innovative financial models, such as public-private partnerships and incentive schemes, should be scaled to address funding challenges. Governments should focus on strengthening their ability to develop compelling funding proposals to access international financing opportunities.
- National task forces should be established to coordinate energy efficiency initiatives, engaging a broad spectrum of stakeholders, including academic institutions, industry leaders, and civil society organizations. Collaborative governance structures can drive innovation and ensure inclusivity.
- Consumer-focused campaigns should emphasize the long-term benefits of energy-efficient technologies, including cost savings and environmental advantages. Tailored messaging strategies should resonate with local audiences to maximize impact.
- Preparing and disseminating region-specific success cases that seamlessly integrate refrigerant transition with energy efficiency gains. These targeted examples should detail measurable impacts, implementation challenges overcome, and replicable stakeholder collaboration models to accelerate regional adoption.

5. DATA ANALYSIS AND VISUAL INSIGHTS

The Twinning Project workshops collectively brought together 422 participants from nine regional networks to foster collaboration among NOOs, NEEPs, and FMFPs, as well as specialists from UN agencies and international, regional, and national experts. By analyzing participation data across regions, we can identify important patterns in regional approaches, gender representation, and stakeholder engagement—insights that will improve future workshops and strengthen collaboration for greater climate impact.

Total Workshop Participation by Region

Comparison of total participants across all regional networks

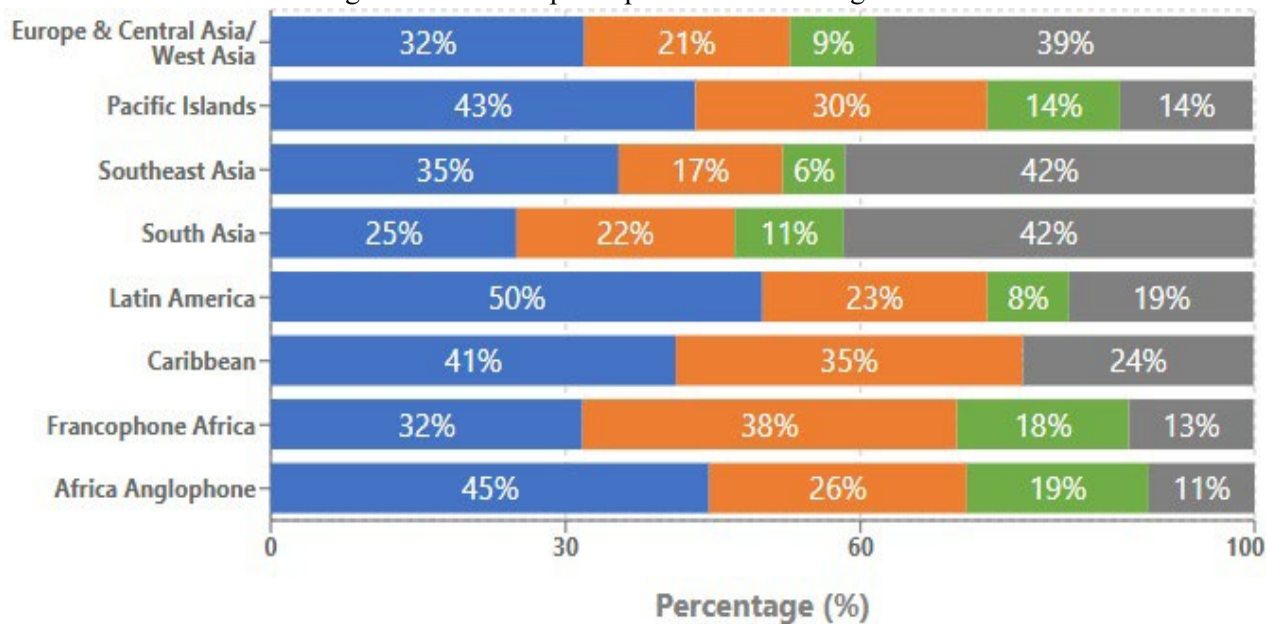


Workshop participation and demographics overview

The data shows global engagement with 422 participants across eight regions. Europe & Central Asia/West Asia leads (91 participants, 21.6%), followed by robust African representation (Anglophone and Francophone together: 128 participants, 30.3%). Balanced distribution across other regions—Latin America and Southeast Asia (48 each), Pacific Islands (37), South Asia (36), and the Caribbean (34)

Participant Role Distribution by Region

Percentage breakdown of participant roles across regional networks



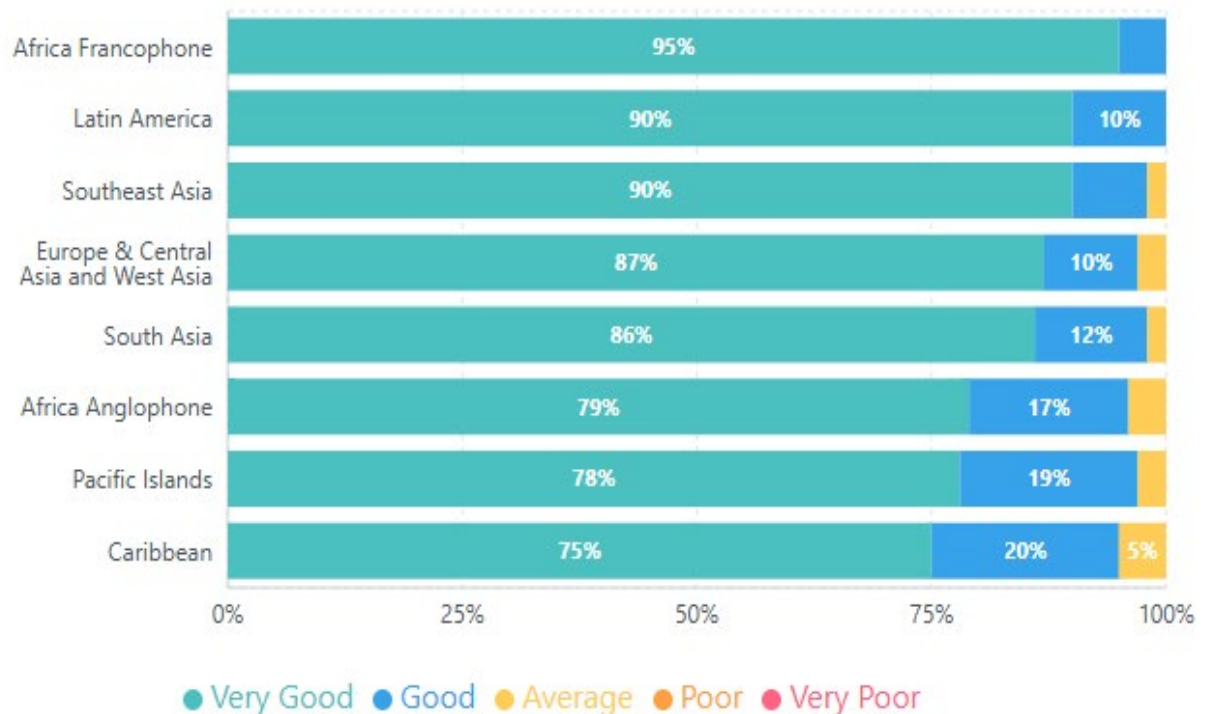
■ **National Ozone Officers (NOOs)**
■ **National Energy Efficiency Personnel (NEEPs)**
■ **Financial Management Focal Points (FMFPs)**
■ **Others**

Participant Role Distribution:

The regional participation chart reveals complementary strengths across regional networks, showcasing strong NOO leadership in Latin America (50%) and Africa Anglophone (44.6%), alongside robust NEEP representation in Francophone Africa (38.1%). Southeast Asia and South Asia significantly benefit from the rich diversity of the "Others" participants category (approximately 41% in both regions), which brings valuable international and regional experts in addition to the Twinning workshop host countries stakeholders who participated in the workshops.

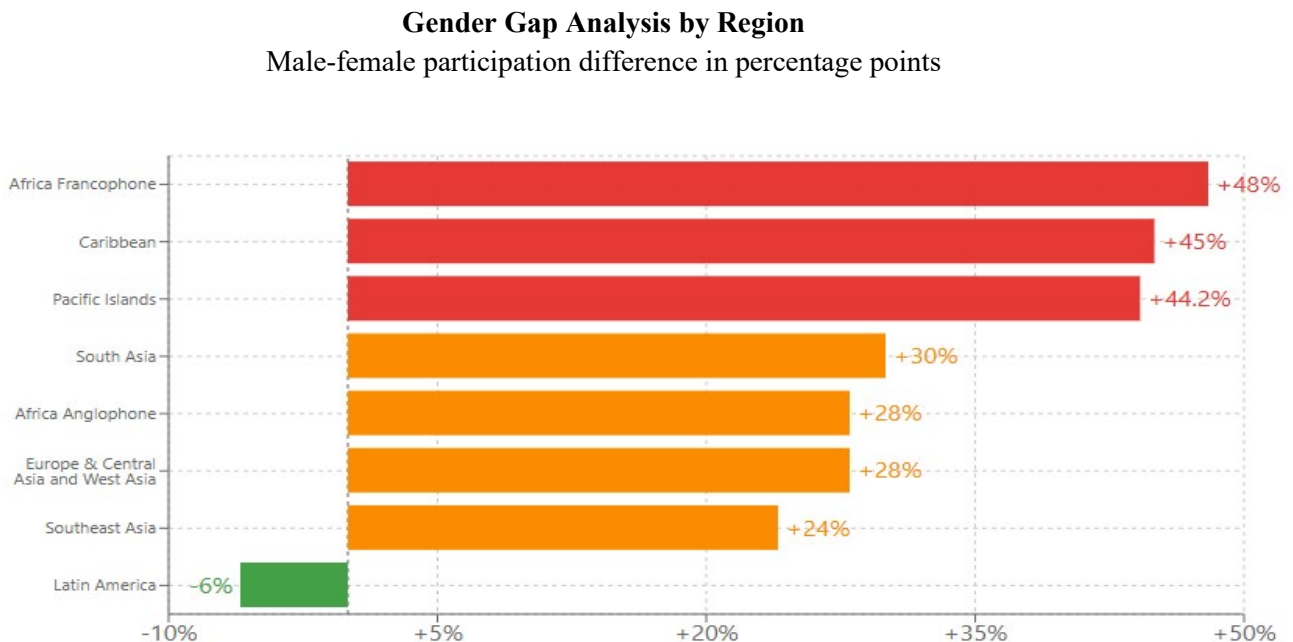
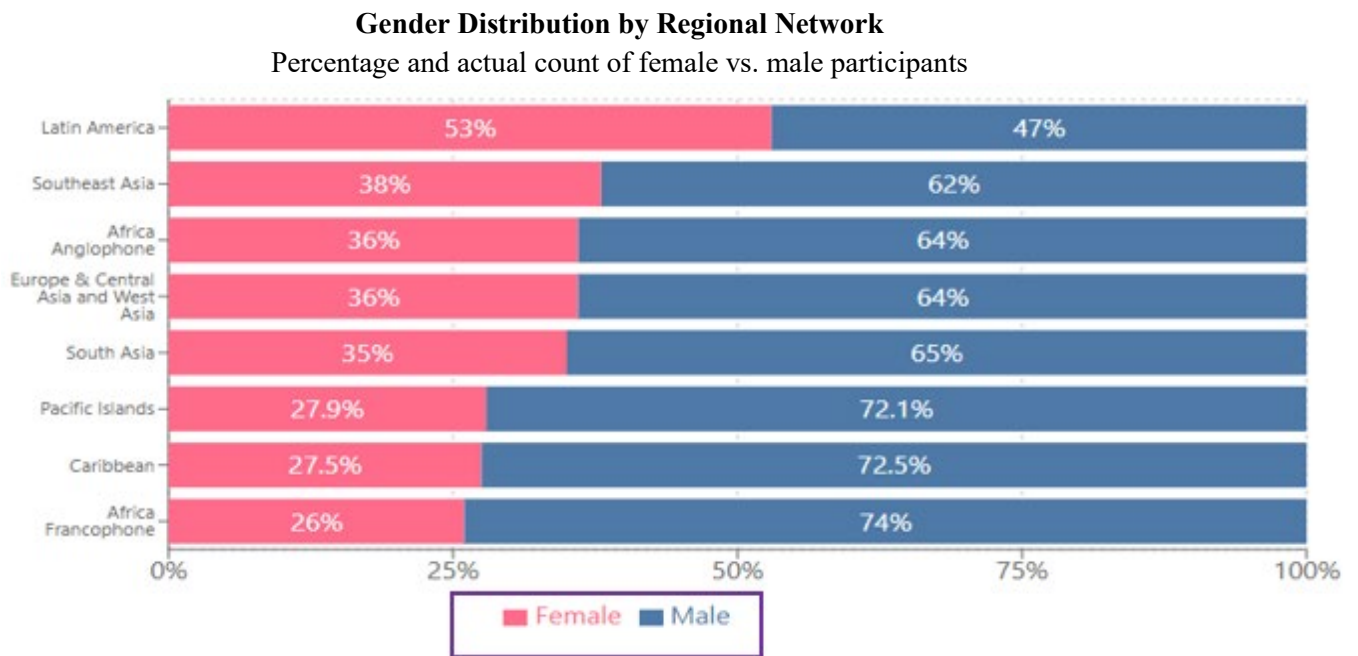
Workshop Evaluation Scores by Region

Breakdown of participant ratings across all regional networks



Workshop quality and satisfaction

Evaluation scores varied significantly across regions, ranging from a high of 95% (Africa Francophone) to a low of 75% (Caribbean). Remarkably, the top-rated workshops represented diverse role distributions, suggesting that participant satisfaction was not necessarily tied to a specific professional composition.



Gender analysis

The gender landscape presented notable disparities. Overall, only 35.3% of participants were female, with considerable variation across networks. Latin America stood out as a positive outlier, being the sole region with female representation exceeding male participation at 53%. In contrast, Africa Francophone displayed the most significant gender imbalance, with female participation as low as 26%—creating a 48% gender gap.

5. FUTURE DIRECTIONS - PHASE II

While Phase I successfully facilitated knowledge exchange, introduced policy integration frameworks, and strengthened stakeholder engagement, countries still face challenges in operationalizing these insights. Key barriers include the lack of tailored information resources, limited access to structured technical guidance, and the need for standardized knowledge tools that can be directly applied at national and regional levels.

To bridge these gaps, Phase II is proposed to work on the development and dissemination of comprehensive information tools and materials that equip stakeholders with the resources needed to implement sustainable cooling solutions effectively—and subsequently integrate them into the second phase of Twinning workshops. These refined workshops will provide stakeholders with practical, ready-to-use resources, ensuring that discussions translate into concrete implementation strategies. This two-step approach will enhance national and regional capacities, foster policy harmonization, and enable more effective access to financing mechanisms, ultimately accelerating Kigali-aligned transitions across participating countries.

Strengthening Knowledge Tools and Information Resources:

The creation of tailored knowledge materials is critical to bridge the gap between policy ambition and on-the-ground implementation. Standardized reference materials provide policymakers, technicians, and financial stakeholders with technical guidance, best practices, and benchmarks needed to operationalize Kigali-aligned strategies. Without these tools, countries face inconsistent approaches to shared challenges, which hinder technological adoption, market growth, and regional harmonization.

Phase II will focus on developing high-quality, region-specific materials that offer practical solutions, case studies, and success stories. These toolkits will help countries integrate refrigerant transitions with energy efficiency improvements, ultimately accelerating sustainable cooling efforts. Examples include guidelines for integrating refrigerants into energy labeling frameworks, protocols for market surveillance and product testing, and educational resources for end-users, such as businesses and community organizations. By equipping stakeholders with these resources, Phase II aims to improve decision-making and foster the adoption of sustainable cooling technologies.

Twinning Workshops as a Platform for Practical Implementation:

Once these knowledge tools are developed, the Twinning workshops will serve as the primary platform for their dissemination. The workshops will be redesigned to include practical exercises, real-world applications, and peer-to-peer learning opportunities. Key elements will include structured training on how to use policy toolkits and technical manuals, as well as cross-country exchanges to share best practices for applying these resources in different regulatory and economic contexts. This approach will ensure that stakeholders not only gain access to essential knowledge but also develop the capacity to implement Kigali-aligned policies and projects effectively.

6. ANNEX

The final reports of each workshop organised under Phase I are available on the OzonAction Meeting Portal as follows:

No	Description	Report
1	<i>Twinning Workshop for the Africa Anglophone Network</i> , Maputo, Mozambique, 13-14 June 2024	Link
2	<i>Joint Twinning Workshop for Europe & Central Asia Network and the West Asia Network</i> , Amman, Jordan, 25-26 September 2023	Link
3	<i>Twinning Workshop for the Caribbean Network</i> , Panama City, Panama, 27-28 June 2024	Link
4	<i>Twinning Workshop for the Francophone Africa Network</i> , Tunis, Tunisia, 10-11 October 2024	Link
5	<i>Twinning Workshop for the Latin America Network</i> , Santiago, Chile, 1-2 August 2024	Link
6	<i>Twinning Workshop for the Pacific Islands Network</i> , Rarotonga, Cook Islands, 5-6 February 2024	Link
7	<i>Twinning Workshop for the South Asia Network</i> , Guangzhou, China, 20-21 May 2024	Link
8	<i>Twinning Workshop for the Southeast Asia Network</i> , Guangzhou, China, 20-21 May 2024	Link



**TWINNING OF
OZONE OFFICERS AND NATIONAL ENERGY EFFICIENCY
POLICYMAKERS TO SUPPORT KIGALI AMENDMENT OBJECTIVES
(PHASE II)**

PROJECT PROPOSAL

Submitted by
United Nations Environment Programme

to the 96th meeting of the Executive Committee of
the Multilateral Fund

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1. INTRODUCTION

The Montreal Protocol has long been recognized for its success in addressing ozone layer depletion. Over the years, discussions have increasingly focused on the energy efficiency aspects of implementing the Protocol, especially following the adoption of the Kigali Amendment. Recognizing that the transition to low global warming potential (GWP) alternatives to hydrofluorocarbons (HFCs) presents an opportunity to maintain or enhance energy efficiency in the cooling sector, the Parties to the Protocol agreed to extend such support in the refrigeration servicing sector. Since its 77th meeting, the Executive Committee of the Multilateral Fund has been exploring different approaches to operationalize Meeting of the Parties Decision XXVIII/2, emphasizing the need to integrate energy efficiency considerations into Kigali Amendment implementation, including via Kigali HFC Implementation Plans (KIPs), special funding windows, and other means.¹ As part of this assistance, the Executive Committee approved UNEP's global technical assistance project entitled "Twinning of Ozone Officers and National Energy Efficiency Policymakers to Support Kigali Amendment Objectives Phase I" (GLO/SEV/91/TAS/365). The first phase of the Twinning project, implemented from 2023 to 2024, enhanced the climate benefits of the refrigerant transitions by promoting energy efficiency improvements in the refrigeration and air conditioning (RAC) sector via capacity building and networking of key national stakeholder groups: National Ozone Officers (NOOs), National Energy Efficiency Policymakers (NEEPs), and Financial Mechanism Focal Point (FMFPs).

Bridging policy and technical expertise: the Twinning approach

At the national level, NOOs are responsible for implementing the Montreal Protocol and ensuring compliance with its provisions. However, integrating energy efficiency considerations into the refrigerant transitions requires a broader policy approach that mainly involves NEEPs as well as other stakeholders.² The Twinning project was structured to bridge these domains by fostering collaboration between NOOs and their energy and finance counterparts. This initiative was aligned with the 2023 Compliance Assistance Programme (CAP) work plan and directly supported UNEP's 2021–2023 CAP Strategy. It also complemented national initiatives such as KIPs by helping to ensure that efforts to phase down HFCs were accompanied by corresponding improvements in cooling efficiency.

Recognizing the importance of regional cooperation, the project was linked to UNEP's Regional Networks of National Ozone Officers, which facilitate the exchange of information, experiences, and best practices among

¹ The Paper on ways to operationalize paragraph 16 of Decision XXVIII/2 and paragraph 2 of Decision XXX/5 of the Parties considered by the 83rd Executive Committee meeting highlighted that although energy efficiency policies are not within the responsibilities of NOOs, they have been encouraged to develop and enforce policies and regulations to avoid market penetration of energy-inefficient RACHP equipment and promote access to energy-efficient technologies in those sectors. Such actions would necessarily require close coordination with their national energy efficiency counterparts. (UNEP/OzL.Pro/ExCom/83/40, paragraph 32).

² The 83rd Executive Committee meeting emphasized that 'Cooperation among NOOs and the authorities responsible for energy efficiency, who have limited experience and a limited role in the adoption of low- or zero- GWP-based technologies, might result in reduced costs to manufacturers and might offer coordinated policy direction to meet national targets. (UNEP/OzL.Pro/ExCom/83/40, paragraph 33). Additionally, the Committee noted that "Capacity building activities relating to regulations, training and institutional coordination with energy efficiency authorities are essential for facilitating the adoption of low- and zero-GWP refrigerants." (UNEP/OzL.Pro/ExCom/83/40, paragraph 49).

Article 5 countries, agencies, and international partners. Under the Twinning project, each participating country was encouraged to engage one NEEP and, optionally, one FMFP, creating a structured mechanism for cross-sectoral collaboration that was appreciated by different regions.

Twinning workshops: strengthening regional and national cooperation

Between 2023 and 2024, UNEP designed eight two-day Twinning workshops covering the ten CAP regional networks and organized them back-to-back with the network meetings, as follows:

- *Joint Twinning Workshop for Europe & Central Asia Network and the West Asia Network*, Amman, Jordan, 25-26 September 2023.
- *Twinning Workshop for the Pacific Islands Network*, Rarotonga, Cook Islands, 5-6 February 2024.
- *Twinning Workshop for the South Asia Network*, Guangzhou, China, 20-21 May 2024.
- *Twinning Workshop for the Southeast Asia Network*, Guangzhou, China, 20-21 May 2024.
- *Twinning Workshop for the Africa Anglophone Network*, Maputo, Mozambique, 13-14 June 2024.
- *Twinning Workshop for the Caribbean Network*, Panama City, Panama, 27-28 June 2024.
- *Twinning Workshop for the Latin America Network*, Santiago, Chile, 1-2 August 2024.
- *Twinning Workshop for the Francophone Africa Network*, Tunis, Tunisia, 10-11 October 2024.

As documented in the final report of the Twinning Project Phase I, these workshops brought together stakeholders from Article 5 countries (including notably from both Groups 1 and 2), providing a platform for discussing best practices, sharing experiences, and exploring strategies to maximize the climate benefits of low-GWP refrigerant adoption and energy efficiency improvements. By facilitating direct engagement between the ozone, climate change, energy, and finance sectors, the workshops enabled stakeholders to:

- Identify synergies between Montreal Protocol compliance, national energy policies, and climate strategies.
- Explore financial mechanisms to support sustainable cooling transitions.
- Discuss policy interventions, such as energy-efficient building codes, minimum energy performance standards (MEPS), and green procurement guidelines.
- Learn from expert insights provided by international/ regional organizations, industry representatives, and regional policymakers.

The Twinning Project has helped national and regional efforts to advance the transition to energy-efficient, low-GWP cooling. Through a series of strategic workshops and stakeholder engagements, the Twinning Project has fostered cross-sectoral collaboration, strengthened policy integration, and introduced financial mechanisms that accelerate the adoption of sustainable cooling solutions.

Below are the key findings, challenges, and recommendations from Phase I which were used to inform the future direction of Phase II.

Key findings and achievements from Phase I

- One of the Twinning Project's most significant achievements has been its focus on knowledge sharing and institutional strengthening as foundational pillars for transitioning to energy-efficient refrigeration and air conditioning (RAC) systems and low-GWP refrigerants. The project's structured workshops and interactive sessions equipped participants with a comprehensive understanding of the technical, regulatory, and financial dimensions of sustainable cooling solutions. By bridging knowledge gaps and offering practical tools, the project has enhanced compliance with the Kigali Amendment and integrated energy efficiency into national strategies. Furthermore, it encouraged stronger collaboration between government agencies, improved internal coordination, and facilitated the development of more robust governance frameworks. The flexibility in training methods allowed participants to apply practical solutions effectively within their specific national contexts.
- Phase I played a crucial role in aligning national energy efficiency policies with the Kigali Amendment's goals, emphasizing the need for a coordinated approach to sustainable cooling. Workshop participants recognized the critical importance of integrating MEPS, energy labeling programs, and National Cooling Action Plans (NCAPs) into broader climate strategies. By bridging refrigerant transition policies with overarching sustainability objectives, the project created a clear pathway for more effective policy implementation. Participating countries were encouraged to develop monitoring and compliance systems to ensure long-term impacts from adopted policy frameworks. Furthermore, the integration of data management practices into policy planning was identified as a pivotal tool, enabling governments to track progress, identify gaps, and refine energy efficiency strategies using evidence-based approaches.
- The success of the Twinning Project lies in its ability to encourage collaboration across sectors and regions. By bringing together NOOs, NEEPs, and FMFPs, the project provided a multidisciplinary platform for addressing shared challenges collectively. This collaborative approach bridged the gaps between energy, climate, and environmental policies, enabling a more coordinated response to sustainable cooling. Furthermore, the workshops highlighted the importance of involving a diverse range of stakeholders, including private sector innovators, civil society organizations advocating for sustainable practices, and academic institutions providing research-driven insights. These partnerships were essential for scaling the adoption of energy-efficient technologies, fostering inclusivity, and promoting innovation. Additionally, regional collaboration helped harmonize energy efficiency standards, facilitating knowledge exchange and coordinating joint initiatives among countries facing similar challenges.
- Phase I introduced stakeholders to cutting-edge RAC technologies, low-GWP refrigerants, and international standards that enhance energy efficiency while minimizing environmental impacts. The initiative ensured that adopted technologies were compatible with international trade and environmental benchmarks, fostering global alignment in cooling solutions.
- A critical emphasis was placed on the importance of regular equipment maintenance and servicing to sustain energy efficiency over time. By focusing on long-term maintenance, the project demonstrated how efficiency gains could be preserved, avoiding performance deterioration. This comprehensive approach integrated technology, policy, and capacity building, ensuring that energy efficiency remained a long-term sustainability goal rather than a temporary intervention.
- Financial sustainability emerged as a key support of the Twinning Project, with the initiative emphasizing the role of innovative funding mechanisms in overcoming the cost barriers associated with

energy-efficient technologies. Stakeholders were introduced to a range of financing options, including the Multilateral Fund, the Green Climate Fund (GCF), public-private partnerships (PPPs), and bulk procurement programs with incentive schemes. By addressing financial barriers through these innovative models, the Twinning Project laid the groundwork for scaling up sustainable cooling solutions and ensuring their long-term economic viability.

To strengthen the implementation of the Kigali Amendment and advance sustainable cooling efforts, a series of common and key recommendations have emerged from the Twinning Project workshops. These recommendations emphasize the importance of integrating key policies, enhancing capacity-building, leveraging financial models, and fostering collaboration across sectors. Additionally, there is a critical need for the development of tailored knowledge tools, information materials, and resources that will equip stakeholders with the information they need to achieve these goals effectively:

- Developing comprehensive policies that integrate MEPS, energy labeling, and climate strategies should be a priority. These frameworks must be supported by enforcement mechanisms, data-driven monitoring systems, and periodic evaluations to ensure sustained progress.
- Innovative financial models, such as public-private partnerships and incentive schemes, should be scaled to address funding challenges. Governments should focus on strengthening their ability to develop compelling funding proposals to access international financing opportunities.
- National task forces and/or national collaboration mechanisms should be established to coordinate energy efficiency initiatives, engaging a broad spectrum of stakeholders, including academic institutions, industry leaders, and civil society organizations. Collaborative governance structures can drive innovation and ensure inclusivity.
- Consumer-focused targeted campaigns should emphasize the long-term benefits of energy-efficient technologies, including cost savings and environmental advantages. Tailored messaging strategies should resonate with local target audiences to maximize impact.
- Preparing and disseminating region-specific success cases that seamlessly integrate refrigerant transition with energy efficiency gains. These targeted examples should detail measurable impacts, implementation challenges overcome, and replicable stakeholder collaboration models to accelerate regional adoption.

2. RATIONALE AND APPROACH

While Phase I successfully facilitated initial knowledge exchange, introduced policy integration frameworks, and strengthened stakeholder engagement, countries still face challenges in operationalizing these insights. Key barriers include the lack of tailored information resources, limited access to structured technical guidance, and the need for standardized knowledge tools that can be directly applied at national and regional levels. The final report of Phase I highlighted several implementation challenges, including limited FMFP participation and the need for standardized knowledge tools to operationalize insights gained during the Phase I workshops.

To bridge these gaps, Phase II will focus on increasing stakeholder involvement, using resources more effectively while developing and disseminating comprehensive information tools and materials. This approach

will equip stakeholders with the resources needed to implement sustainable cooling solutions effectively, which will subsequently be integrated into the second phase of Twinning workshops. These refined workshops will provide participants with practical, ready-to-use resources, ensuring that discussions translate into concrete implementation strategies. This two-step approach will enhance national and regional capacities, foster policy harmonization, and enable more effective access to financing mechanisms, ultimately accelerating Kigali Amendment-aligned transitions across participating countries.

Optimizing stakeholder participation and resource allocation in Phase II

The evaluation of Phase I workshops revealed that while the twinning approach between NOOs and NEEPs was highly effective, the participation of FMFPs was uneven across the regions. Analysis of participation data from the eight regional workshops conducted in 2023-2024 indicates that FMFP attendance was inconsistent and substantially lower than that of NOOs and NEEPs. This can be attributed to several factors, including competing preferences and priorities at the national level and the specialized nature of the workshops. Additionally, the limited time available during a two-day workshop to cover multiple topics made it difficult to adequately address the potential role of financial mechanisms in Kigali Amendment implementation. Therefore, Phase II will implement a strategic adjustment to maximize impact and resource efficiency by focusing in-person workshop participation exclusively on NOOs and NEEPs, the two stakeholder groups that demonstrated the highest level of engagement and cross-sectoral collaboration potential during Phase I. Phase II will also allocate resources to developing need-based knowledge tools. These resources could for example include information on financial innovation mechanisms, for example those related to "Cooling as a Service," bulk procurement mechanisms, public-private partnerships (PPPs), or case studies of successful sustainable cooling initiatives.

Strengthening and enhancing knowledge tools and information resources

Information materials and toolkits represent the missing link between policy ambition and practical implementation. Without them, stakeholders at all levels—from national policymakers to local technicians—lack the technical guidance, standardized procedures, and reference benchmarks needed to translate the shared knowledge into actionable steps. The development of targeted information materials and toolkits is essential for three fundamental reasons:

- Without standardized reference materials, countries develop inconsistent approaches to similar challenges, creating barriers to technology adoption, market growth, and regional harmonization.
- The Kigali Amendment requires unprecedented coordination between traditionally separate domains of refrigerant management and energy efficiency. Targeted information materials create a common language and shared understanding between environmental agencies, energy departments, industry actors, and financial institutions.
- Countries at earlier stages of Kigali Amendment implementation need not reinvent processes already developed elsewhere. Comprehensive toolkits capture the best practices and case studies, allowing countries to leapfrog common obstacles.

Phase II will contribute to developing these high-quality, region-specific materials that empower policymakers, technicians, and financial stakeholders with the insights needed to drive Kigali Amendment-aligned cooling transitions. By providing practical guidance and success stories, these resources will bridge critical knowledge

gaps and catalyze informed decision-making. Additionally, Phase II will document and disseminate case studies that highlight how refrigerant transitions can be seamlessly integrated with energy efficiency improvements. These knowledge tools and resources will help lay the foundation for the workshop component of this phase.

Twinning workshops: a platform for practical implementation

Once these knowledge tools and resources are developed, Twinning workshops will serve as the primary platform for their dissemination and application. These workshops will be redesigned to ensure that stakeholders receive structured guidance on utilizing the newly developed materials, bridging the gap between knowledge acquisition and on-the-ground implementation. Key enhancements to the workshops will include:

- Practical exercises and real-world applications using policy toolkits, and technical manuals/guidelines.
- Facilitating cross-country exchanges to discuss best practices in applying knowledge tools within different regulatory and economic contexts.

By embedding structured information tools into the Twinning workshops, Phase II will ensure that stakeholders not only gain access to essential knowledge but also develop the capacity to implement Kigali-aligned policies and national projects effectively. This approach will drive meaningful progress in sustainable cooling transitions, supporting national and regional efforts to achieve climate resilience.³

3. STRATEGIC OBJECTIVES

Phase II will serve as a bridge between policy planning and implementation, focusing on three key areas:

1. ***Strengthening institutional capacity and collaboration through national coordination mechanisms:*** To foster stronger coordination between NOOs, NEEPs and other stakeholders to ensure harmonized policymaking and regulatory alignment, and that would include:
 - Facilitate the establishment of National Coordination Mechanisms to enhance cooperation among regulatory agencies, industry representatives, and financial institutions.
 - Develop model governance frameworks and operational guidelines for National Coordination Mechanisms to improve decision-making and accountability. A National Coordination Mechanisms Toolkit will be developed to guide their formation, covering governance structures, role definitions, and templates for Memoranda of Understanding (MOUs) and proposals.
2. ***Enhancing technical knowledge and resources:*** To develop and/or adapt existing toolkits and information materials that address specific challenges identified during Phase I. This could include one or more of the following:

³ This approach aligns with the Executive Committee's recognition at its 83rd meeting of the need for 'Coordination with energy efficiency policy makers in setting up and/or operationalizing MEPS, labelling systems and other mechanisms for the introduction of energy-efficient RACHP equipment.(UNEP/OzL.Pro/ExCom/83/40, paragraph 50(b)). The *Evaluation of Regional Networks of National Ozone Officers* presented to the 86th Executive Committee meeting further reinforced this by noting that networks are 'requiring engagement of new stakeholders (e.g., climate and energy-efficiency experts) while maintaining momentum for the remaining ODS phase-out.(UNEP/OzL.Pro/ExCom/86/11, paragraph 73).

- Refrigerant Integration Guidelines to incorporate refrigerant-related data into MEPS and energy labeling frameworks, with procedures for integrating information on refrigerant type, quantity, and GWP; alignment with international safety standards; and methodologies for assessing RAC systems performance while considering refrigerant environmental impact.
 - Market Surveillance Toolkit to equip regulatory bodies with resources for effective market surveillance and compliance verification, offering protocols for product testing and market audits, verification guidelines for assessing energy performance and refrigerant data, and enforcement frameworks with appropriate penalties and consumer protection mechanisms.
 - Technical Assessment Toolkit providing comprehensive documentation for evaluating RAC systems' performance, including standardized testing protocols based on global standards, detailed criteria for assessing efficiency with a focus on refrigerant performance, and preformatted templates for documenting evaluation results and simplifying compliance reporting.
 - Policy Integration Toolkit to support the alignment of MEPS and energy labeling standards across regions to promote consistency in trade and technology adoption. The toolkit will be offering structured templates, guidelines, and checklists for incorporating MEPS and energy labelling into regulatory frameworks, with pre-designed policy templates for country-specific contexts, comprehensive regulatory checklists to ensure compliance with existing regulations, and step-by-step guidance for embedding standards into legislative frameworks.
 - Document and disseminate region-specific case studies that integrate refrigerant transition with energy efficiency improvements. These cases will showcase measurable impacts, outline the challenges overcome, and present replicable stakeholder collaboration models to accelerate adoption across different regions.
 - End-User Awareness resource development with educational materials tailored to businesses, schools, and community organizations to promote sustainable cooling practices.
3. ***Twinning workshops for scaling knowledge and collaboration:*** Following the development of toolkits and resources, regional Twinning Workshops (held back-to-back with regional network meetings to maximize participation, with interpretation support when required) will be organized across the nine networks to introduce key knowledge tools, provide hands-on training, facilitate National Coordination Mechanisms formation, and foster regional cooperation.

Expected outcomes

Phase II will transform strategies into concrete results by strengthening institutional cooperation, providing stakeholders with essential knowledge tools, aligning policies, and enhancing access to financing. This comprehensive approach will deliver measurable, tangible outcomes. By connecting refrigerant transitions with energy efficiency improvements, the initiative addresses both climate change mitigation and energy security, generating lasting environmental and economic benefits. The structured, region-specific strategy will enable countries to implement sustainable cooling solutions, cut emissions, and contribute to global resilience.

By the end of Phase II, the project expects to achieve:

- Active participation of over 290 stakeholders in implementing Kigali-aligned projects.
- Formal national coordination mechanisms established or strengthened in at least one country per region.
- Up to 5 comprehensive toolkits developed, peer-reviewed, and tested with stakeholders.
- At least 9 regional workshops conducted with multi-sectoral representation.

4. PROJECT IMPLEMENTATION

Implementation plan

This implementation plan draws on lessons learned and stakeholder feedback captured in the final report of Twinning Project Phase I, ensuring continuity while addressing identified gaps and opportunities.

This plan outlines a comprehensive strategy that is designed to bridge the gap between policy planning and practical implementation of the Kigali Amendment and energy efficiency measures across CAP regional networks. Building on the foundation established in Phase I, this plan presents a structured approach with timelines, resource allocations, and expected outcomes to ensure successful implementation of the Kigali Amendment commitments while promoting energy-efficient cooling technologies across all regions.

The implementation plan is organized into three interconnected components:

1. ***Preparation and assessment:*** Establishing baseline knowledge through comprehensive regional gap analysis and laying the groundwork for all project components and mainly the knowledge and information resources required.
2. ***Knowledge and information resource development:*** Creating tailored tools and resources to address identified needs
3. ***Twinning workshop organization:*** Facilitating practical knowledge transfer and cross-sectoral collaboration

The plan spans 30 months, with Components 1 and 2 completed within the first 12 months, followed by 18 months for Component 3 implementation.



Activities

- 1. Regional technical experts' identification:** The first key activity in Phase 1 will be to identify and recruit qualified technical experts for each of the regional networks. These regional experts will play vital ongoing roles throughout the entire 30-month project timeline. During Phase 1 (Months 1-5), they will conduct regional gap analyses, evaluate existing coordination mechanisms, collect baseline data, and contribute to workshop framework development. As the project progresses to Phase 2 (Months 6-12), these same experts will provide technical input and coordination for toolkits and knowledge resources development, review draft materials, ensure regional customization, and validate resource accuracy. In the final Phase 3 (Months 13-30), they will support workshop design, deliver regional training sessions, provide post-workshop technical assistance, and contribute to the impact assessment. Candidate screening will be based on established criteria, including relevant technical experience in refrigerant management and energy efficiency, qualifications in environmental science, engineering, or related fields, and demonstrated familiarity with regional contexts and challenges.
- 2. Regional gap analysis:** Conduct comprehensive assessments across all CAP regional networks to identify and confirm specific knowledge gaps, technical needs, and implementation barriers, taking into consideration the projects' Phase I findings and reflected in the final report of Twinning Project Phase I. Analyze regional differences in cooling sector challenges and opportunities, highlighting unique constraints and favorable conditions in each region.
- 3. National coordination mechanism assessment:** Evaluate existing coordination mechanisms between National Ozone Units, energy agencies, and other key stakeholders in participating countries. Map institutional frameworks, administrative processes, communication channels, and decision-making procedures that impact cross-sectoral coordination on cooling issues. Identify structural barriers to effective collaboration and potential opportunities for integration.
- 4. Baseline data collection:** Document existing best practices and success stories for inclusion in knowledge resources, with particular focus on initiatives that successfully integrate energy efficiency with refrigerant transition. Identify specific regional constraints in technology adoption and policy implementation through stakeholder interviews, document review, and field assessments.
- 5. Twinning workshop groundwork:** Develop concepts for workshop curricula informed by preliminary assessment findings. Identify regional and international technical experts for each region with demonstrated experience in participatory learning methodologies. Establish comprehensive criteria for participant selection to ensure appropriate representation across sectors and gender balance. Begin strategic planning to synchronize workshops with regional network meeting schedules to maximize participation and resource efficiency.

Timeline

- Month 1: Expert recruitment and methodology development
- Months 2 to 3: Regional gap analyses and coordination assessments
- Months 3 to 4: Baseline data collection
- Month 5: Analysis finalization and workshop planning

Resources required

- Human resources: 9 regional technical experts, assessment methodologists, and data analysts
- Technical resources: Survey platforms, analytical software, mapping tools, data management systems

Key milestones

- Month 1: Experts contracted, methodologies finalized
- Month 2: Stakeholder engagement strategy completed
- Month 3: Assessment protocols established
- Month 4: All regional data collection completed
- Month 5: Assessment reports and workshop framework finalized

Component 2: Knowledge and Information Resource Development (Months 6 to 12)

Methodology and activities

1. Content Planning: Confirm knowledge and information resources required by each region based on Phase I findings and Component-1 assessment. Establish expert working groups for each toolkit category. Identify existing resources that can be adapted or referenced.
2. Resource Development Process: Draft initial content based on assessment findings. Conduct peer reviews with technical experts. Test resources with target users from different regions. Refine Knowledge and Information resources based on feedback.
3. Tailoring to Regional Contexts: Customize resources to address regional priorities and challenges. Translate materials into relevant languages. Create an accessible online platform to host all resources.

Examples of the proposed knowledge and information resources

- Policy Integration Toolkit: Provides structured templates for incorporating MEPS and energy labeling into regulatory frameworks, adaptable policy templates for country-specific contexts, regulatory checklists for compliance, step-by-step guidance for embedding standards into legislation, and the Legislative & Policy Options/RAC Sector Action Tool for tracking HFC phase-down progress and developing targeted policies.
- Technical Assessment Toolkit: Offers standardized testing protocols for RAC systems based on global standards, criteria for assessing efficiency with a focus on refrigerant performance, templates for documenting evaluation results, and tools for simplifying compliance reporting.
- Market Surveillance Toolkit: Includes protocols for product testing and market audits in the RAC sector, verification guidelines for assessing energy performance and refrigerant data, and enforcement frameworks with penalties and consumer protection mechanisms.
- Refrigerant Integration Guidelines: Provide procedures for integrating refrigerant type, quantity, and GWP into MEPS, guidance on aligning with international safety standards, and methodologies for assessing RAC systems' performance considering refrigerant impact.
- National Coordination Mechanisms Toolkit: Includes governance structures, operational guidelines, role definitions, templates for MOUs between agencies, and best practices for cross-sectoral collaboration.

- End-User Awareness Resources: Provide targeted educational materials for businesses, schools, and communities, guidance on sustainable cooling practices, and communication materials highlighting the benefits of efficient, Kigali-compliant cooling.

Timeline

- Months 6 to 8: Initial content development Months 9 to 10: Expert review and revision
- Month 11: Translation and regional customization
- Month 12: Finalization of resources and platform development.

Resources required

- Human Resources: subject matter specialists, translators
- Financial Resources: content development, design, translation.

Key milestones

All toolkit content drafted (Month 8)

- Expert review completed (Month 10)
- Resources translated and adapted to regional contexts (Month 11)
- Digital platform launched with all resources (Month 12)

Component 3: Twinning Workshop Organization (Months 13 to 30)

Workshop planning and implementation activities

1. Develop comprehensive workshop curricula based on knowledge resources. Design interactive sessions that facilitate peer-to-peer learning. Create practical exercises for applying the toolkits. Finalize region-specific case studies and discussions.
2. Confirm workshop schedules with regional network meetings. Secure appropriate venues with necessary technical capabilities. Arrange for interpretation and workshop materials. Finalize participant selection based on established criteria.
3. Prepare detailed session guides and facilitation content and methodologies. Conduct facilitator briefings for regional context awareness.
4. Distribute preparatory materials to participants. Conduct needs assessment surveys to refine workshop content. Engage with participants to identify specific country challenges.

Workshop execution

1. Workshop Structure: Introduction to knowledge tools and resources. Hands-on training with toolkits. Facilitated discussions on regional and national applications. Action planning sessions for national-level implementation.
2. Participant Engagement Strategies: Balanced mix of presentations, discussions, and practical exercises. Peer-to-peer knowledge exchange sessions. Country case study presentations. Small working groups focused on specific implementation challenges.

3. Cross-Sectoral Collaboration Focus: Facilitate the formation of National Coordination Mechanisms. Develop draft MOUs between agencies and other supporting material.

Timeline

- Months 13 to 15: Final workshop design and preparation
- Months 16 to 26: Workshop delivery across ten regional networks
- Months 27 to 30: Follow-up/ Impact assessment and Final reports completed

Resources required

- Human resources: Regional experts to facilitate workshops, technical specialists, and logistics coordinators
- Financial resources: Budget for venues, travel, accommodation, materials, interpretation

Key milestones

- Workshop curricula and materials finalized (Month 15)
- All regional workshops conducted (Month 26)
- Impact assessment and Final reports completed (Months 27 to 30)

5. SUSTAINABILITY

The sustainability approach for Phase II incorporates key recommendations from the Twinning Project Consolidated Completion Report of Phase I (2023-2024), particularly regarding the institutionalization of cross-sectoral collaboration mechanisms.

Phase II envisions a transformative approach that extends well beyond the 30-month implementation period. This strategy doesn't seek to complete project activities; rather, it aims to catalyze enduring systemic change in how countries approach energy efficiency and Montreal Protocol implementation. At its core, the strategy recognizes that true sustainability emerges from embedding new practices within existing institutional structures. By encouraging the establishment of National Coordination Mechanisms as permanent inter-ministerial committees, the project seeks to create enduring platforms where energy, environment, and finance stakeholders can continue their collaboration long after project completion. These mechanisms, when successfully integrated into national development plans and climate strategies, may become the backbone of ongoing Kigali Amendment implementation in participating countries.

Technical sustainability represents another critical dimension of this approach. The project envisions the development of South-South cooperation networks where countries facing similar challenges can exchange knowledge and solutions independently. This could potentially lead to regional centers of excellence that serve as hubs for continued innovation and adaptation of energy-efficient cooling technologies. The creation of formal pathways for technology transfer might enable ongoing partnerships with research institutions and manufacturers, fostering a self-sustaining ecosystem of technical advancement.

Strategic partnerships form the third pillar of this sustainability vision. By formalizing relationships through memoranda of understanding with key partners and connecting national stakeholders to international networks, the project aims to create lasting channels for knowledge exchange and resource mobilization. If successful, these partnerships could evolve into durable alliances that continue driving progress on sustainable cooling solutions for decades to come.

The project also anticipates long-term impacts through policy integration and regulatory frameworks. The development of model regulatory approaches for MEPS, energy labeling, and refrigerant controls could provide countries with templates that inform policy evolution well into the future. Similarly, the creation of tools for regulatory impact assessments will equip policymakers with the means to continuously refine their approaches as technologies and markets evolve.

While these outcomes represent the project's vision, their realization remains contingent on multiple factors, including political will, resource availability, and competing priorities in participating countries. The degree to which these sustainability mechanisms take root will likely vary across regions, with some countries potentially emerging as leaders while others face continued challenges in institutionalizing the project's approaches.

The sustainability strategy for Phase II of the Twinning Project provides a clear pathway for ensuring long-term impact. The expected long-term outcome of this sustainability strategy—if successfully implemented—would be a fundamental shift in how countries approach cooling challenges. Rather than viewing energy efficiency and refrigerant management as separate domains, countries might increasingly adopt integrated approaches that maximize climate benefits while meeting growing cooling demands. This integration could potentially lead to accelerated adoption of climate-friendly cooling solutions, significant energy savings, and measurable progress toward national climate commitments under the Paris Agreement.

6. GENDER MAINSTREAMING CONSIDERATIONS

UNEP OzonAction is dedicated to advancing gender equality and the empowerment of women in alignment with UNEP's *Policy and Strategy for Gender Equality and the Environment* and the Multilateral Fund's *Operational Policy on Gender Mainstreaming for Multilateral Fund-supported Projects*. In March 2022, OzonAction launched its internal Gender Mainstreaming Plan, outlining a structured approach to integrating gender considerations into both institutional (internal) and programmatic (external) activities.

The final report of Phase I (2023-2024) highlighted significant gender disparities across regional networks, with female participation averaging only 35.3% overall. Notable regional variations were observed, with Latin America achieving the highest female representation (53%), while Africa Francophone had the lowest at 26%. Four regions (Africa Francophone, Caribbean, Pacific Islands, and Africa Anglophone) demonstrated gender gaps exceeding the global average of 30%.

Building on these findings, Phase II will implement enhanced gender mainstreaming measures:

- Embedding gender considerations at all stages of the project lifecycle, from preparation and implementation to monitoring and reporting, with specific targets to address regional disparities identified in Phase I.
- Ensuring equal participation opportunities for female NOOs and NEEPs in workshops, with special emphasis on regions where gender gaps were most pronounced.
- Utilizing e-learning and digital knowledge tools to provide gender-neutral and accessible training opportunities, removing potential barriers to female participation.
- Establishing minimum thresholds for female representation among speakers, facilitators, and participants for workshops, with participation data systematically tracked and reported against Phase I baselines.
- Encouraging NOOs and project partners to actively consider gender balance when nominating participants, with specific guidance materials included in the project's knowledge resources.
- Incorporating gender-specific considerations into knowledge materials and toolkits to ensure they address the unique challenges faced by women in the cooling sector.

By including these gender-responsive strategies into the project execution and measuring progress against Phase I benchmarks, UNEP aims to cultivate a more inclusive and equitable approach to capacity building, policy development, and implementation in the cooling sector, ultimately reducing the identified gender gaps.

7. PERFORMANCE INDICATORS

The following table outlines the proposed performance framework for Phase II. Building on insights from the final report of Phase I (2023-2024), these indicators establish clear metrics to measure project success across all three components. The framework emphasizes tangible, measurable outcomes that directly support the strategic objectives while enabling adaptive management throughout the implementation period. These performance metrics will be systematically tracked and evaluated, to ensure transparency and accountability.

Component	Expected outcomes	Performance indicators
1. Preparation & Assessment	▪ Comprehensive understanding of regional needs, gaps, and barriers. ▪ Mapped institutional frameworks and coordination mechanisms for cross-sectoral collaboration. ▪ Documentation of best practices and successful case studies. ▪ Evidence-based framework for designing workshops aligned with regional priorities.	▪ 9 regional technical experts contracted. ▪ 9 regional assessment reports finalized with detailed gap analysis and recommendations. ▪ Institutional coordination mechanisms mapped in at least 70% of participating countries. ▪ At least 3 successful case studies documented per region, covering policy, technical, and financial aspects. ▪ Workshop framework developed and validated by regional experts, ensuring alignment with identified needs.
2. Knowledge & Information Resource Development	▪ Development of a suite of tailored toolkits and resources addressing regional challenges. ▪ Establishment of an online knowledge-sharing platform.	▪ Up to 5 comprehensive toolkits developed, peer-reviewed, and tested with stakeholders. ▪ Online platform launched and operational, within the first year.

Component	Expected outcomes	Performance indicators
	- Regional customization and translation of materials to enhance usability. - Strengthened stakeholder capacity for integrating energy efficiency with refrigerant transition.	- At least 2 customized regional adaptations per toolkit based on country-specific needs. - At least 3 languages used for translation, ensuring broad accessibility
3. Twinning Workshop	- Strengthened technical and institutional capacity of stakeholders to implement Kigali Amendment commitments. - Improved cross-sectoral collaboration for integrated policy and technology adoption. - Enhanced financial literacy and access to funding mechanisms for sustainable cooling initiatives.	- At least 250 stakeholders actively participating across all regional networks - Formal coordination mechanisms established or strengthened in at least one country from each region. - At least 9 regional workshops conducted with multi-sectoral representation.

8. BUDGET

The budget allocation reflects the resource optimization strategy recommended previously in the "Rationale and Approach for Twinning Project Phase II" section of the proposal. This strategic budgetary approach was developed in direct response to the participation patterns observed during Phase I and documented in the final report.

Item	Description	Amount (US\$)	Subtotal
COMPONENT 1: PREPARATION & ASSESSMENT			
Regional technical experts (energy efficiency)	One expert per region. Supports analysis and production of regional assessment reports, development of workshop frameworks and methodologies, and planning and delivery of twinning workshops	135,000	
Needs assessment tools	Survey software, data analysis tools, and analytical frameworks	1,200	
Regional assessment reports	Analysis, compilation, and production of assessment reports	0	
<i>Subtotal</i>			136,200
COMPONENT 2: KNOWLEDGE & INFORMATION RESOURCE DEVELOPMENT			
Subject matter consultants/specialists	Content development experts for up to 5 toolkits and information resources categories	116,000	
Design and production	Graphic design, layout, and production of materials	10,000	
Translation	Translation of materials into regional languages	29,000	
Digital platform development	Web development for online resource repository	2,000	
<i>Subtotal</i>			157,000
COMPONENT 3: TWINNING WORKSHOP ORGANIZATION			
Travel and daily subsistence allowance (DSA) for National Ozone Officers (NOO) and	147 participants in each category. NOOs costing only for additional days of DSA	350,000	

National Energy Efficiency Policymakers (NEEP)			
Travel and daily subsistence allowance (DSA) for Regional Energy Efficiency Organisations	20 participants	50,000	
Travel and daily subsistence allowance (DSA) for Resource persons	20 participants	100,000	
Workshop venues and logistics	9 regional workshops including venue rental, equipment, and support services		
		<i>Subtotal</i>	500,000
		<i>Grand total</i>	793,200

Notes:

1. The budget allocates Technical Regional Expert fees (\$15,000 per expert × 9 networks = \$135,000) equally across all three components to ensure continuity throughout the 30-month project.
2. Travel costs are concentrated in Component 3 to support the extensive in-person workshop activities across all 9 regional networks.
3. The digital platform developed in Component 2 will continue to serve as a resource repository throughout Component 3 and beyond the project timeline, providing sustainable value.

This budget structure ensures appropriate resource allocation across all project phases while maintaining flexibility to address region-specific needs identified during the assessment phase.

9. WORKPLAN

This work plan covers the 30-month implementation of Phase II of the Twinning Project, designed to bridge the gap between policy planning and practical implementation of the Kigali Amendment and energy efficiency measures across CAP regional networks.

Milestone	Time period	Duration	Deliverables
COMPONENT 1: PREPARATION & ASSESSMENT			
Experts contracted, methodologies finalized	Month 1	1 month	Expert contracts, assessment methodology documents
Regional gap analyses & coordination assessments	Months 2-3	2 months	Stakeholder database, assessment protocols
Baseline data collection	Months 3-4	2 months	Regional data collection reports
Assessment reports & workshop framework finalized	Month 5	1 month	Regional assessment reports, workshop framework document
COMPONENT 2: KNOWLEDGE & INFORMATION RESOURCE DEVELOPMENT			
Initial content development	Months 6-8	3 months	Draft toolkit content
All toolkit content drafted	Month 8	Milestone	Draft knowledge resources for all toolkit categories
Expert review and revision	Months 9-10	2 months	Expert-reviewed toolkit content
Translation and regional customization	Month 11	1 month	Regionally adapted resources
Digital platform launched with resources	Month 12	1 month	Finalized toolkits, launched digital resource platform

Milestone	Time period	Duration	Deliverables
COMPONENT 3: TWINNING WORKSHOP ORGANIZATION			
Workshop design finalization	Months 13-15	3 months	Detailed workshop design documents
Workshop curricula and materials finalized	Month 15	Milestone	Workshop curricula, facilitation guides, participant materials
Workshop delivery across regional networks	Months 16-26	11 months	Regional workshop implementation
All regional workshops conducted	Month 26	Milestone	Workshop reports, participant action plans, national coordination mechanisms
Post-workshop support	Months 27-30	4 months	Follow-up assistance reports
Impact assessment and final reporting	Months 29-30	2 months	Final impact assessment report, success stories documentation

Critical path and dependencies

The critical path for successful implementation involves several key dependencies:

- Regional gap analyses must be completed to properly inform resource development
- Knowledge resources must be finalized before workshop curricula can be designed
- Workshop materials must be completed before regional workshops can begin
- All workshops must be conducted before the final impact assessment