

Program and Budget Committee

Thirty-Fourth Session
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SUPPLEMENTARY CAPITAL MASTER PLAN PROPOSAL FOR THE PCT RESILIENT AND SECURE PLATFORM (RSP) HYBRID PHASE

prepared by the Secretariat

BACKGROUND

1. The Patent Cooperation Treaty (PCT) is a cornerstone of WIPO's Global IP services, helping innovators from all over the world to move their patents across borders. Security and resilience of the PCT's services are therefore critical to the business operations of PCT applicants and Offices. As organizations become increasingly more digitized, an assured continuity of services is a critical means to maintain the confidence of users of the PCT services and to attract new customers.
2. In order to be responsive, efficient and ensure the highest level of security, WIPO needs to make sure that it builds adequate and fit for purpose communication interfaces between itself and its Member States, customers and key stakeholders.
3. In 2017, the WIPO Assemblies approved Phase I of the RSP Capital Master Plan (CMP) Project¹, with the objective to establish a first Data Center (DC1), replacing the current Primary Data Center during the biennium 2018/19. During the implementation of

¹ See document WO/PBC/27/9

Phase I, the Secretariat continuously monitored ICT developments in the external environment to ensure that the technology choices foreseen for the project remained the best-of-breed and, at the same time, financially sustainable in the long term.

4. Following the detailed analysis and design phase, it was determined that a solution based on emerging industry trends would be able to provide at least the same high security features as compared to the physical data centers originally envisaged by the project, while representing a considerably more cost-effective solution for recurring costs. Given that further discussions with Member States were required as to the hosting of PCT's highly confidential information in a cloud environment, the related part of the implementation of Phase I was put on hold.

5. Against this backdrop, a transition phase for the RSP Project was approved by Member States in 2021 and is currently under implementation in 2022. This transition phase allows progress on other streams of work to continue whilst keeping the cloud component of the RSP temporarily suspended.

6. Regular reporting on the status of implementation of individual CMP projects is included in the annual and biennial WIPO Performance Reports (WPRs) submitted to the PBC. The progress of the PCT RSP project as at end 2021 is included in the WPR for 2020/21², Annex XI. Table 1 provides an updated status of budget utilization as at May 31, 2022, and projected expenditure for the remainder of 2022 for the PCT RSP project.

Table 1: Status of CMP PCT RSP Project
(in thousands of Swiss francs)

	Total Project Budget	Cumulative Expenditure to Dec 31, 2021	Remaining Balance in Special Projects Reserve Dec 31, 2021	To be Returned to Accumulated Surpluses	2022 Estimated Expenditure		Projected Special Projects Reserve Dec 31, 2022
					Actual Expenditure ¹ as at April 30	Estimated Expenditure May 1 - Dec 31	
Capital Master Plan Projects (A/57)							
PCT Resilient and Secure Platform - Phase I ²	8,800	6,598	2,202	-	414	1,591	197

¹ 2022 Actual expenditure excludes pre-encumbrances and encumbrances.

² Includes additional budget of 800,000 Swiss francs (document A/62/7) to support software transformation and renovate the outdated PCT IT infrastructure (without cloud technology).

SUPPLEMENTARY CAPITAL MASTER PLAN (CMP) PCT RSP – HYBRID PHASE

Business Case

7. The PCT infrastructure is accumulating technical debt³, lacking mandatory evolutions to maintain a high level of security and resiliency for its systems. A transition status is no longer sustainable and it is therefore proposed to adopt a hybrid approach for the evolution of the PCT infrastructure. This consists of maintaining the highly confidential PCT documents under the strict control of WIPO, using local, secure dedicated infrastructure, while leveraging the public cloud for the PCT processing systems.

8. The work streams within the scope of the Hybrid Phase of the RSP would include:

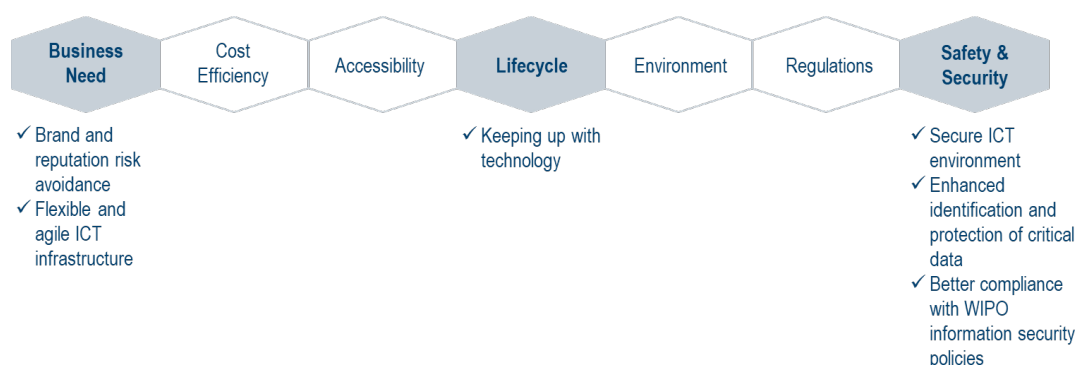
² Document WO/PBC/34/7.

³ Technical debt is the implied cost of additional maintenance caused by choosing a limited solution now rather than investing in a more robust approach.

- **Securing PCT highly confidential data within WIPO:** continue the local management by WIPO of this set of data, whilst modernizing it to improve security and resiliency; and
- **Modernizing PCT processing workflows:** remodel, secure and streamline PCT processing workflows including by leveraging public cloud services, creating synergies between locally managed documents and their processing *via* a hybrid solution.

9. It should be reiterated that the proposals above are needed to prevent the PCT from being left behind with an aging and increasingly vulnerable infrastructure. A failure to take this decision will result in an increased risk profile from medium to high in the coming year, going against WIPO's Risk Appetite Statement (3.2 - Improved productivity and service quality of WIPO's global IP systems, services, knowledge and data (risk appetite: low) and 5.2 - Information and Communication (risk appetite: low)). Moreover, a failure to make the proposed investments into the future of the PCT system will heighten the risk of a successful breach in the security of the PCT system, which in turn would severely damage WIPO's reputation and trust in PCT services.

Figure 1: PCT RSP Hybrid Phase Main Drivers



Project Objectives and Link to WIPO's Expected Results and Medium-term Strategic Plan

10. The objectives of the PCT RSP Hybrid Phase project are as follows:
- To ensure adequate identification and protection of PCT critical data against security threats, in particular cyber-attacks through an increase in the security of the systems' storing and processing of sensitive and critical PCT data;
 - To increase the availability, resilience and continuity of WIPO's critical PCT business processes and related systems in case of major technical issues or disasters;
 - To improve the data identification, classification and protection; and
 - To improve PCT business systems agility and uniformity.
11. The following table illustrates how the PCT RSP project links with WIPO's Expected Results and Medium-term Strategic Plan (MTSP) 2022-2026.

Table 2: PCT RSP Hybrid Phase Project - Link to WIPO's ER and MTSP

Expected Result	Project Contribution
<i>Strategic Pillar 3</i>	<i>Provide high quality intellectual property services, knowledge and data that deliver value to users around the world</i>
3.2 Improved productivity and service quality of WIPO's global IP systems, services, knowledge and data	<ul style="list-style-type: none"> - Increase security of systems storing and processing WIPO's sensitive and critical PCT data - Improve data identification, classification and protection
<i>Foundation</i>	<i>Empower our people to work effectively, collaboratively and innovatively by providing them with the right resources, training and environment</i>
5.2 Digitally enabled, secure and sustainable operating environment and service	<ul style="list-style-type: none"> - Agile, future ready, secure and flexible provision of ICT infrastructure
5.3 Sound and prudent financial management and effective corporate governance and oversight	<ul style="list-style-type: none"> - Increase resilience of the PCT with regards to security threats

Expected Benefits, KPIs, Baselines and Targets

12. The expected benefits and measurements of success of the Project are summarized below:

Table 3: PCT RSP Project - Expected Benefits

Benefit description	KPIs	Baseline Value	Target Value
Improved PCT critical systems service levels and reduced interruption time for PCT critical systems	PCT systems availability (internal and external)	99.5%	99.8%
Reduced likelihood of malicious or unintentional disclosure or modification of unpublished application/registration/patent information, reduced likelihood of cyber-attacks and reduction of impact resulting from a successful cyber-attack	Surface of exposure of cyber threats	53,5%	40%
	Risk assessment on PCT's security posture	Medium	Low
Reduced interruption time for PCT critical systems	Return To Operations in case of a major incident	1 day	1 hour
Reduced interruption time for PCT critical systems	Recovery Point Objective for PCT Data	30 min	10 min

Deliverables and Budget

13. The total estimated one-time cost of the PCT RSP Hybrid Phase Project amounts to 9.945 million Swiss francs. This project phase would be implemented during the period 2023-2025. The expected deliverables and the associated budget are shown in the table below.

Table 4: PCT RSP Project - Budget 2023-25

Deliverables	Budget* <i>(in Swiss francs)</i>
Software transformation: modernize, secure and streamline PCT processing applications	2,211,000
Software transformation: migrate modernized applications to the hybrid infrastructure	804,000
PCT Infrastructure: modernizing the document management infrastructure	1,200,000
PCT Infrastructure: deliver PCT hybrid cloud infrastructure	3,200,000
Security: implement measures to secure hybrid model	2,080,000
RSP: Program management	450,000
Total Project Costs	9,945,000
<i>Estimated WIPO Personnel Costs</i>	<i>79,500</i>

*Program management and technical experts are included in the budget by deliverable

Estimated Recurring Operational Costs

14. The estimated recurring costs are shown in the table below. The costs would be applicable from the year 2026 and will be partially offset by the expected savings from the decommissioning of the existing PCT IT infrastructure. The costs will be included in the successive Program of Work and Budget proposals as part of the regular budget.

Table 5: PCT RSP Project - Recurring Operational Costs

Recurring Operational Costs	Estimated cost per year <i>(in Swiss francs)</i>
Local secure storage solution for highly confidential PCT Documents, incl. hybrid network	700,000
Cloud infrastructure	850,000
Infrastructure management resources	400,000
Security	920,000
Total	2,870,000

STATUS OF THE UTILIZATION OF RESERVES

15. The first principle (Principle 1) set out for use of the Reserves in the Revised Policy Related to the Reserves⁴ pertains to the availability of amounts above the reserve target level. The balance of Reserves in excess of the mandated reserve target level and the Special Projects Reserve is estimated at 472.3 million Swiss francs at the end of 2022. For the purposes of prudence, the calculation of available reserves excludes: (i) the Working Capital Funds and Revaluation Reserve Surplus, as per Principle 2 of the Revised Policy on Reserves; and (ii) the projected Overall Result after Reserve Expenditure for 2022.

⁴ Revised WIPO Policy Related to Reserves (document WO/PBC/23/8) and Annex I provides a synopsis of the analysis of compliance with each of the principles contained in the Revised Policy Related to Reserves

Table 6: Estimated Status of Reserves end 2022
(in millions of Swiss francs)

Total Reserves¹ at 31.12.21 (actuarial gains/(losses) ² excluded)	702.6
<i>of which:</i>	
Accumulated Surpluses at 31.12.21	667.8
Special Projects Reserve at 31.12.21	34.8
<i>Estimated Movements of Special Projects Reserve in 2022</i>	
Estimated to be Returned to Accumulated Surpluses	(0.6)
Estimated Expenditure on Projects Financed from the Reserves in 2022	(19.0)
Proposed Supplementary CMP Project	9.9
Special Projects Reserve (estimated) at 31.12.22	25.2
Total Reserves (estimated) excluding Special Projects Reserve at 31.12.22	677.5
RWCF Target 2022/23³	205.2
Balance of Reserves in Excess of Reserve Target Level⁴	472.3

¹ Excluding Working Capital funds (WCF) and Revaluation Reserve Surplus

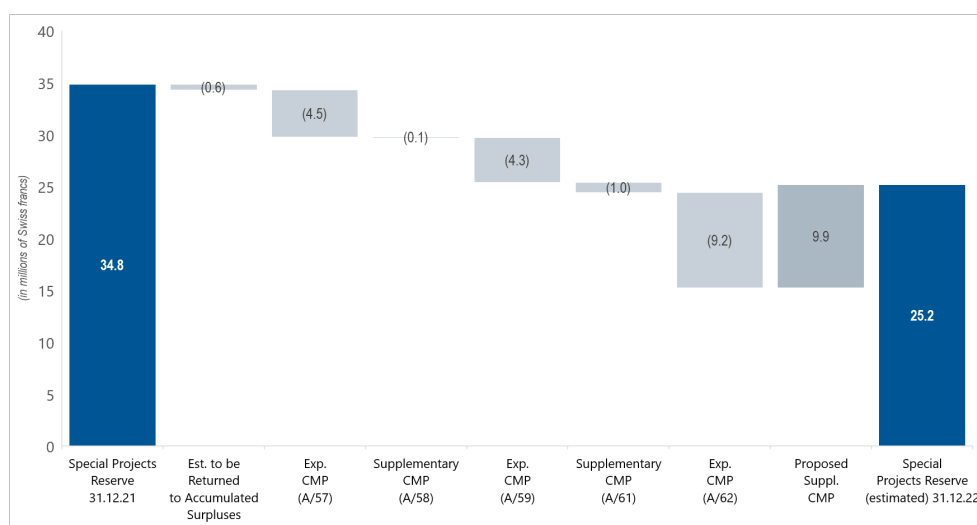
² Actuarial gains/(losses) at 31.12.21 amounted to -320.9 million Swiss francs.

³ Reserve target is based on targets for the Unions determined in the Revised Policy on Reserves i.e. 25.9% of the total 2022/23 biennial budget of 793.8 million Swiss francs.

⁴ Does not take into account the projected Overall Result after Reserve Expenditure for 2022.

16. As illustrated in Table 5, the proposed funding of 9.945 million Swiss francs for the PCT RSP Hybrid Phase project can be absorbed without affecting the required target level of Reserves, since the projected balances can prudently accommodate the proposed expenditures. In addition, the estimated movements of the Special Projects Reserve, including the proposed project, shows the overall level of Reserves decreasing from 34.8 million Swiss francs at the end of 2021 to 25.2 million Swiss francs at the end of 2022 (see diagram below).

Estimated Movements Status of Reserves end 2022
(in millions of Swiss francs)



17. It should be noted that, as the Organization's financial statements are prepared on an IPSAS basis, expenditure on Information Technology (IT) projects will be capitalized where it meets the required recognition criteria. For each project, a determination will be made on whether capitalization is allowable under IPSAS, when detailed information on the costs and scheduled implementation become available. Where a project is capitalized, the expenditure is recognized over the useful life of the resulting asset once the project has reached completion and is available for use. In these cases, the impact of the expenditure on the Organization's reserves is, therefore, deferred over a longer period through an annual amortization or depreciation charge, as opposed to an immediate impact as the project is implemented.

ALLOCATION OF PROPOSED SUPPLEMENTARY CMP PCT RSP HYBRID PHASE PROJECT TO THE UNIONS

18. The Resilient Secure Platform Hybrid Phase project, which is proposed for financing from the Reserves, directly benefits the PCT Union. The project costs are hence allocated as direct Union expenditure to the PCT Union.

19. Table 7 provides an overview of the estimated level of the Reserves by Union at the end of 2022, which includes the allocation of cost of the proposed project. Table 7a provides an overview of the estimated movements of the Special Projects Reserve by Union.

Table 7: Estimated Status of Reserves end 2022 by Union
(in thousands of Swiss francs)

	CF Unions	PCT Union	Madrid Union	Hague Union	Lisbon Union	Total
Total Reserves¹ at 31.12.21 (actuarial gains/(losses) ² excluded)	21,732	660,280	94,730	(67,909)	(6,220)	702,612
<i>of which:</i>						
Accumulated Surpluses at 31.12.21	21,532	634,905	86,989	(69,427)	(6,220)	667,779
Special Projects Reserve at 31.12.21	200	25,375	7,741	1,518	-	34,834
<i>Estimated Movements of Special Projects Reserve in 2022</i>						
Estimated to be Returned to Accumulated Surpluses	(3)	(519)	(53)	-	-	(575)
Estimated Expenditure on Projects Financed from the Reserves in 2022	(106)	(14,185)	(3,291)	(1,466)	-	(19,049)
Proposed Supplementary CMP Project	-	9,945	-	-	-	9,945
Special Projects Reserve (estimated) at 31.12.22	91	20,616	4,397	51	-	25,155
Total Reserves (estimated) excluding Special Projects Reserve at 31.12.22	21,641	639,664	90,332	(67,960)	(6,220)	677,457
RWCF Target 2022/23³	21,586	141,694	36,820	5,104	-	205,205
Balance of Reserves in Excess of Reserve Target Level⁴	55	497,970	53,512	(73,065)	(6,220)	472,253

¹ Excluding Working Capital funds (WCF) and Revaluation Reserve Surplus

² Actuarial gains/(losses) at 31.12.21 amounted to -320.9 million Swiss francs.

³ Reserve target is based on targets for the Unions determined in the Revised Policy on Reserves i.e. 25.9% of the total 2022/23 biennial budget of 793.8 million Swiss francs.

⁴ Does not take into account the projected Overall Result after Reserve Expenditure for 2022.

Table 7a: Estimated Movement of Special Projects Reserve in 2022 by Union
(in thousands of Swiss francs)

	CF Unions	PCT Union	Madrid Union	Hague Union	Lisbon Union	Total
Special Projects Reserve at 31.12.21	200	25,375	7,741	1,518	-	34,834
<i>Estimated Movements of Special Projects Reserve in 2022</i>						
Estimated to be Returned to Accumulated Surpluses	(3)	(519)	(53)	-	-	(575)
<i>Estimated Expenditure on Projects Financed from the Reserves in 2022</i>						
Capital Master Plan Projects (A/57)	(6)	(2,481)	(2,012)	-	-	(4,498)
Supplementary Capital Master Plan Projects (A/58)	(1)	(46)	(19)	(10)	-	(76)
Capital Master Plan Projects (A/59)	(27)	(2,637)	(258)	(1,405)	-	(4,326)
Supplementary Capital Master Plan Projects (A/61)	(12)	(829)	(113)	(22)	-	(976)
Capital Master Plan Projects (A/62)	(60)	(8,193)	(889)	(30)	-	(9,172)
Sub-total Estimated Expenditure	(106)	(14,185)	(3,291)	(1,466)	-	(19,049)
Proposed Supplementary CMP Project	-	9,945	-	-	-	9,945
Special Projects Reserve (estimated) at 31.12.22	91	20,616	4,397	51	-	25,155

IMPACT ON CASH FLOWS AND LIQUIDITY LEVELS OF THE RESERVES

Impact on Cash Flow

20. After setting aside the operational reserve target of 25.8 per cent of the Program of Work and Budget (198 million Swiss francs for 2020/21) and the Reserves established for the funding of after-service employee benefit liabilities (Strategic Cash amounting to 211.2 million Swiss francs at the end of 2020, and 237.2 million Swiss francs at the end of 2021), the balance of Core Cash, including the Special Projects Reserve, is as follows:

Table 8: Reserves as per Investment Policy
(in millions of Swiss francs)

	31-Dec-21	31-Dec-20
Total Cash and Investments	1,114.5	932.0
Operating Reserve (RWCF target 2020/21)	198.0	198.0
Strategic Cash	237.2	211.2
Core Cash*	679.3	522.8

* Core Cash includes the Special Projects Reserve

21. The balance of cash and investments increased by 182.5 million Swiss francs between December 31, 2020, and December 31, 2021. The Organization retains sufficient liquidity available for cash requirements.

22. In accordance with WIPO's Investment Policy, the Core Cash balance is invested while ensuring that sufficient cash is made available to meet contingencies should it be required. In addition, WIPO's cash balances are replenished on an annual basis with operating surpluses.

Liquidity Levels of the Reserves

23. The liquid portion of WIPO's net assets has been defined as the excess of its current assets over its current liabilities after certain adjustments are made based on IPSAS requirements. The position of the liquid portion of the net assets has moved from 545.6 million Swiss francs at the end of 2020 to 688.5 million Swiss francs at the end of 2021.

24. During 2020 and 2021, the Organization continued to make significant investments as part of its Policy on Investments. In the 2020 and 2021 Annual Financial Statements, the portion of Core and Strategic Cash invested is included in non-current assets, since the Organization plans to hold these balances in investments, which exceed a one-year timeframe in order to maximize return while preserving capital. The Strategic Cash is invested for the longer term, resulting in a reduction of liquid reserves. The Core Cash has been invested in such a way as to ensure that the funds remain available should they be required to meet any contingencies. Therefore, for the calculation of Reserve liquidity, the Core Cash investments are considered liquid. However, it is important to note that the Core Cash is invested with the objective of generating a positive return over rolling five-year periods.

25. The other adjustment made to the calculation of the liquid portion of net assets concerns advance receipts, net of the current asset Accounts Receivable PCT. Unlike other liabilities, advance receipts represent deferred revenue already received in cash, which will form part of WIPO's revenue and surplus within a period of 12 months or less. Therefore, the cash portion of advance receipts are not considered an offset to WIPO's liquid assets, since they do not result in any outflow of cash resources.

Table 9: Evolution of Net Liquid Reserves
(in millions of Swiss francs)

	31-Dec-21	Position after Adjustments 31-Dec-21	31-Dec-20	Position after Adjustments 31-Dec-20
Current Assets*	304.4		328.0	
Core Cash non-current investments		675.9		471.7
Accounts Receivable PCT		(62.3)		(53.1)
Net liquid current assets		918.0		746.6
Current Liabilities	565.1		518.8	
Adjustment for advance receipts		(335.6)		(317.8)
Net liquid current liabilities		229.5		201.0
Net current assets	(260.7)		(190.8)	
Liquid portion of net assets		688.5		545.6

* The 2020 comparative presentation has been amended by an increase of 1.0 million Swiss francs.

26. WIPO's available cash and the liquid element of its reserves are both more than sufficient to fully finance the level of cash outflow proposed for the CMP projects and the balances of the existing CMP projects.

27. The following decision paragraph is proposed.

28. *The Program and Budget Committee (PBC), recommended to the Assemblies of WIPO, each as far as it is concerned, to approve, from the WIPO Reserves, the funding of the PCT RSP Hybrid Phase project, amounting to a total of 9.945 million Swiss francs.*

[Annex follows]

ANNEX: COMPLIANCE WITH RESERVE POLICY PRINCIPLES

PRINCIPLE 1: Proposals for the use of the RWCF should only pertain to the amounts available in the RWCF exceeding the target level required by WIPO's Policy on Reserves. This is applicable both at the level of individual Unions as well as at the level of the Organization as a whole.

Compliance with Principle 1: The balance of the Reserves (excluding WCF, Revaluation Reserve Surplus and actuarial gains/(losses) as at end 2021 amounted to 702.6 million Swiss francs. The balance of Reserves in excess of the Target Level and the Special Projects Reserve is estimated at 472.3 million Swiss francs at the end of 2022.

In addition, the balance of PCT Union Reserves in excess of the mandated reserve Target Level and the Special Projects Reserve is estimated at 498 million Swiss francs at the end of 2022. The proposed funding of the PCT RSP Hybrid Phase project for implementation in 2023-25 amounting to 9.945 million Swiss francs is, therefore, well within the estimated balance.

PRINCIPLE 2: The calculation of the available Reserves will be based on the information on the RWCF levels contained in the most recent financial statements and must take into due consideration the actual, committed and planned expenditures from reserves for the financial period(s) during which the proposed project will be implemented. The Revaluation Reserve Surplus (which arises from the revaluation of the land on which the new building has been constructed) and the Working Capital Funds (which were established through Member States contributions) will be excluded from the calculation of the amounts available in excess of the RWCF target.

Compliance with Principle 2: The calculation of the available Reserves excludes the WCF and Revaluation Reserve Surplus (Tables 5 and 6 refer).

PRINCIPLE 3: Proposals for the use of available Reserves should be limited and for one-time projects for capital improvements and exceptional circumstances, as decided upon by the Assemblies of the Member States and of the Unions, each as far as it and its available reserves are concerned. Capital projects would typically be identified in a long-term capital master plan and may be defined as projects related to construction/refurbishment and Information and Communication Technology that are needed to keep an Organization's facilities and systems fit-for-purpose through significant expansion or additions.

Compliance with Principle 3: The proposed project is a one-time, key capital ICT investment.

PRINCIPLE 4: Proposals for the use of the Reserves should be prepared in a comprehensive manner with information on full lifecycle costs of the projects, estimated benefits (which may be both financial and qualitative in nature), recurring expenditures that the Organization will be committed to budgeting for as part of the regular budget in subsequent biennia, and the impact on cash flows and liquidity levels of the Reserves.

Compliance with Principle 4: The proposed project provides a comprehensive overview of the key capital investment foreseen, including the full one-time cost. In addition, the project is not estimated at having any negative impact on cash flows and liquidity levels of the Reserves (please see paragraphs 25 to 28).

PRINCIPLE 5: Proposals for the use of the Reserves may be for projects and initiatives that are outside the biennial financial period of the Organization and may cut across, or last for, more than one biennia.

Compliance with Principle 5: The implementation of the PCT RSP Hybrid Phase project would take place between 2023 and 2025 cutting across two biennia.

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