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The European Centre for Medium-Range Weather Forecasts

The European Centre for Medium-Range Weather Forecasts (ECMWF) is an independent intergovernmental organisation supported by 23 Member States and 12 Co-operating States. It was created by a Convention that came into force on 1 November 1975 and was amended on 6 June 2010. The governing bodies are the Council, the Director-General, and the Council's advisory committees, whose functions are defined in the Convention.

ECMWF is both a research institute and a 24/7 operational service, producing and disseminating numerical weather predictions to its Member States. This data is fully available to the national meteorological services in the Member States. The Centre also offers a catalogue of forecast data that can be made available under various conditions to WMO National Meteorological and Hydrological Services, researchers and commercial customers. A free and open dataset is also available for general use. Other strategic activities include maintaining a data archive, assistance in advanced education, assistance to the World Meteorological Organization (WMO) in implementing its programmes and collaboration with Space Agencies. The supercomputer facility (and associated data archive) at ECMWF is one of the largest of its type in Europe.

ECMWF was established as a major initiative in European scientific and technical co-operation in meteorology, based on a high-performance computing facility (HPCF), a scientific and technical workforce, the production of medium-range weather forecasts, and related research and development. The collaborative aspect of ECMWF remains to this date a key to its success; our staff of around 445 are from over 30 countries, and developing effective partnerships with meteorological services, space agencies, academia, and other organisations that help ECMWF to achieve its targets is a key priority. Establishing closer and more effective collaborations with leading institutions is helping the Centre to continue to develop its models and satisfy its users' increasing requirements.

ECMWF's key duty to its Member and Co-operating States is to deliver timely, reliable and accurate global numerical weather predictions that meet each country's requirement.

Since 2014, ECMWF operates two services from the European Union's Copernicus Earth observation programme, the Copernicus Atmosphere Monitoring Service (CAMS) and the Copernicus Climate Change Monitoring Service (C3S). This participation was renewed in July 2021 and covers the period to the end of 2028. ECMWF also contributes to the Copernicus Emergency Management Service (CEMS), through flood and fire predictions.

ECMWF is also a key partner in the European Union's Destination Earth initiative since December 2021.

The audit of ECMWF's FSA

Audit Opinion of the External Auditor

Opinion

We have audited the Financial Statements of ECMWF, including Copernicus and Destination Earth, for the financial year ended 31 December 2022. The Financial Statements consists of the Statement of Financial Position; the Statement of Financial Performance; the Statement of Cash Flow; the Statement of Changes in Net Assets & Equity; Notes and schedules to the Financial Statements, including a summary of significant accounting policies.

In the opinion of the OAGN, the Financial Statements give a true and fair view of the financial position of ECMWF as at 31 December 2022; its financial performance as disclosed and specified in the 2022 accounts and principal notes; its cash flow for the financial year then ended, in accordance with International Public Sector Accounting Standards (IPSAS) and the Financial Regulations of ECMWF.

Basis for Opinion

We conducted our audit based on internationally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are free of material misstatement. The OAGN believes that the audit evidence it has obtained is sufficient and appropriate to provide a basis for its opinion.

Responsibilities of Management and those charged with governance The management of ECMWF is responsible for preparing Financial Statements in accordance with introduced IPSAS standards and ECMWF Financial Regulations. Management is also responsible for establishing adequate and functioning internal control systems to ensure that the Financial Statements are free of material misstatement due to fraud or error.

Auditors responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes its opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISSAI's will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregated, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISSAI's, the OAGN exercises professional judgment and maintains professional skepticism throughout the audit. It also:

Identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence that is sufficient and appropriate to provide a basis for its opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as

fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Director-General.
- Concludes on the appropriateness of Director-General's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on ECMWF's ability to continue as a going concern
- Evaluates the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events, in a manner that achieves fair presentation.

The OAGN communicates with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that it identifies during its audit.

Specific observations and recommendations are set out below in our Annual Report for 2022, which we issue in accordance with Article 2 (1.b) of the External Audit Agreement.

Signed at the Office of the Auditor General of Norway, Oslo, 31.03.2023

Assistant Director General

Senior Audit Adviser

Director-General's Statement

The European Centre for Medium-Range Weather Forecasts (ECMWF) is an intergovernmental organisation whose primary purposes are the development of a capability for medium-range weather forecasting and the provision of medium-range weather forecasts to its Member and Co-operating States. ECMWF is supported by 35 States.

An amended Convention was entered into force on 6 June 2010, allowing new Member States to join ECMWF. Several Co-operating States have started the procedure to become a Member State, with a number of conversions occurring in the past few years.

In 2017, ECMWF Member States have approved the proposal by the Italian Government and the Emilia Romagna Region to host ECMWF's new data centre in Bologna. The premises were formally handed over to ECMWF on 29 April 2022. The Bologna premises hosts the Centre's new supercomputers, whilst the Centre's headquarters are to remain in the UK. ECMWF has been in ongoing discussions with the UK regarding the provision of a new office building in the grounds of the University of Reading which was approved during 2021.

In December 2020, ECMWF Member States decided to select Bonn as the third ECMWF duty station after an international competition. In July 2021, the new facility welcomed its first staff members. This facility is envisaged to accommodate approximately 150 staff, with the possibility of extension, and the transition to this facility is expected to be ongoing until the first half of 2024.

The agreement for both the C3S and CAMS Copernicus services operated by ECMWF on behalf of the EU has been extended until 2028. Member States and the European Commission have regularly expressed their satisfaction about how the services are being run and their strong support to ECMWF in its role of Entrusted Entity.

An agreement was also signed with the EC for ECMWF to be a major partner in the implementation of the Destination Earth (DestinE) initiative together with ESA and EUMETSAT. The agreement commenced on the 15th December 2021. The agreement covers the whole duration of the Multiannual Financial Framework (MFF; 2021-2027) but the current budget and entrusted tasks will only cover phase I which is a 30-month period, with further phases to be covered through amendments to the overall budget and entrusted tasks The objective of the European Commission DestinE initiative is to deploy several highly accurate thematic digital replicas of the Earth, called Digital Twins, to monitor and predict natural and human activities as well as their interactions, to develop and test scenarios that would enable more sustainable developments and support corresponding European policies for the Green Deal.

This document contains the financial statements of ECMWF for the year ending 31 December 2022. It details the 2022 financial results, reconciliation of results between IPSAS and cash accounting and the auditors' opinion.

Exchange rates during the year continued to have a high degree of volatility and in particular rates for Euro compared to Sterling fluctuated considerably during 2022. This was managed closely by the Centre and resulted in an overall surplus in the year. This will continue to be closely monitored during future years. Similarly, the price of electricity and inflation have been quite volatile and the situation has been managed through the year, in close collaboration with the Finance Committee and Council.

In order to comply with IPSAS 39, the Statement of Financial Position includes as a liability, the present value of £346.8m (2021: £540.8m) of any future pension and post-employment medical costs as calculated by the Centre's actuaries. This liability is partly offset by the Pension Investment Accounts of £69.2m and the whole of the liability is guaranteed by the Member States of the Centre.

In 2022, under IPSAS, the Centre produced an operating deficit of £18.7m and when the net finance costs are excluded, the Centre had a net accounting surplus for the period of £926k.

ECMWF's budget is still set on a cash basis and the Financial Statements include a reconciliation of the results under IPSAS and in cash terms. Under cash accounting, I note that the Centre generated a surplus of £16.3m in 2022, which is available either for future investment or distribution to Member States according to a decision to be made by the Council in 2023.

Florence Rabier

Director-General

31 March 2023

Statement on Internal Financial Control

This Statement represents my assurance to Council that, as Director-General, I am satisfied that the Centre's finances are adequately controlled.

The Senior Management Team ensures an appropriate control environment is in place by clearly defining management responsibilities and powers, evaluating the systems in place to ensure compliance with those policies, plans, procedures, laws and regulations which could have significant impact on the organisation, formally monitoring progress against objectives and risk exposure relating to achievement of objectives and making informed decisions if necessary to steer performance back on track, keeping proper records, and safeguarding the assets of the organisation.

The system of internal financial control is based on a framework of regular management information, administrative procedures including segregation of duties, and a system of delegation and accountability. It includes a comprehensive zero-based, bottom-up annual budget which is reviewed and agreed by the Council, and regular reviews by the Senior Management Team of quarterly Management Information Reports and annual financial reports which indicate performance against key financial and non-financial objectives.

The Head of Internal Audit oversees a co-sourced internal audit function and reports directly to ECMWF's Audit Committee. The Audit Committee meets on a biannual basis to review reports prepared by Internal Audit and other departments. The Head of Internal Audit in turn keeps the Centre's Management Team informed of the matters that have been considered, and day-to-day operations are reported to me as the Director-General.

The internal audit function operates in accordance with the "International Standards for the Professional Practice of Internal Auditing". An Internal Audit plan is approved by the Audit Committee annually. The work plan takes account of areas of potential risk identified.

The Head of Internal Audit provides the Audit Committee with biannual reports on assignments carried out. These reports highlight deficiencies or weaknesses, if any, in the system of internal financial control and the recommended corrective measures to be taken where necessary. They also include an overview of all audit recommendations and the progress in their implementation.

The Senior Management Team's monitoring and evaluating the effectiveness of the system of internal financial control is informed by the Internal Audit function and by the work of the Audit Committee.

Florence Rabier

Director-General

31 March 2023

Statement of Financial Performance for the year ended 31 December 2022

	Notes	2022	2021
		£	
Revenue			
Member & Co-operating States' contributions		54,663,537	51,217,309
Revenue Taxes		12,976,912	11,255,767
Externally funded revenue		43,798,853	49,114,872
Sales of forecasts and data		12,892,873	12,072,971
Other operating revenue		12,352,205	7,472,517
Total Operating revenue		136,684,680	131,133,435
Expenditure			
Personnel costs ^{1,3}	15	37,521,743	33,729,662
Pension and post-employment benefits	12 & 15	29,809,441	27,994,254
Buildings expenditure	15	9,461,172	7,617,762
Computer expenditure	15	14,727,388	16,420,324
Other operating expenditure	15	4,384,177	3,430,543
Externally funded expenditure ^{1, 2}	15	39,855,224	46,434,363
Total operating expenditure		135,759,145	135,626,907
Operating (deficit) / surplus for the year from co	ntinuing operations	925,536	(4,493,472)
Finance income	16	1,631,892	33,216
Finance costs	16	(21,227,187)	(7,649,011)
Net deficit for the year from continuing operatio	ns	(18,669,759)	(12,109,267)
Net deficit for the year		(18,669,759)	(12,109,267)

¹ These items of expenditure are inclusive of tax

ECMWF's budget is still set on a cash basis and under cash accounting, the Centre generated a surplus of £16,267k in 2022.

A reconciliation of the cash to IPSAS result is included in Note 18 to the Financial Statements.

 $^{^{\}rm 2}$ Externally funded expenditure includes optional programmes

³ Personnel costs exclude staff whose posts are fully or partially directly externally funded. These costs are included in externally funded expenditure

Statement of Financial Position as at 31 December 2022

	Notes	2022	2021
		£	£
ASSETS			
Current assets			
Cash and cash equivalents	4	85,812,327	65,719,999
Receivables	5	23,074,928	12,674,476
Prepayments and accrued revenue	6	5,334,092	3,716,632
Inventory	7	1,082,954	757,778
Total current assets		115,304,301	82,868,885
Non current assets			
Property, plant and equipment	8	13,856,134	14,349,915
Pension investment accounts	12	69,254,543	72,649,757
Total non current assets		83,110,677	86,999,672
TOTAL ASSETS		198,414,979	169,868,557
LIABILITIES			
Current Liabilities			
Payables	9	19,521,546	19,151,285
Pre-financing	10	48,130,511	32,392,451
Deferred revenue	11	3,157,041	2,296,533
Total current liabilities		70,809,101	53,840,268
Non current liabilities			
Employee benefits	12	346,831,227	540,847,267
Total non current liabilities		346,831,227	540,847,267
TOTAL LIABILITIES		417,640,329	594,687,535
NET LIABILITIES		(219,225,350)	(424,818,978)
NET ASSETS / (EQUITY)			
General Reserve	13	2,394,996	2,394,996
Retained surpluses		(70,842,709)	(53,777,309)
Net (deficit) / surplus for the year		(18,669,759)	(12,109,267)
Actuarial adjustments		(40,759,023)	(269,978,543)
IPSAS adjustment reserve	14	(91,348,855)	(91,348,855)
TOTAL NET LIABILITIES		(219,225,350)	(424,818,978)

Statement of Cash Flow for the year ended 31 December 2022

	2022	2021
	£	£
Cash flow from operating activities		
(Deficit) / Surplus from ordinary activities	(18,669)	(12,109,267)
Depreciation	2,780,051	2,418,641
Loss/(Profit) on disposal of fixed assets	3,561	-
Finance costs for post-employment benefit (note 12)	21,120,823	6,259,689
Post-employment benefit	17,477,870	16,763,003
(Increase) / Decrease in receivables	(10,400,452)	(1,133,572)
(Increase) / Decrease in inventories	(325,176)	(152,979)
Decrease / (Increase) in prepayments and accrued income	(1,882,533)	1,822,858
(Decrease) / Increase in payables	336,360	(2,408,022)
Increase / (Decrease) in pre-financing	16,037,038	20,176,419
Increase / (Decrease) in deferred revenue	860,508	41,893
Net use of Retained Surplus	(4,956,133)	(6,793,347)
Net cash flow from operating activities	22,379,759	24,885,317
Cash flow from investing activities		
Purchase of fixed assets	(2,287,432)	(4,136,118)
Proceeds from sale of fixed assets	-	-
Net cash flow from investing activities	(2,287,432)	(4,136,118)
Net increase/(decrease) in cash and cash equivalents	20,092,328	20,749,199
Cash and cash equivalents at the beginning of the year	65,719,999	44,970,800
Cash and cash equivalents at the end of the year	85,812,327	65,719,999

Statement of Changes in Net Assets/Equity for the year ended 31 December 2022

	General reserve	Retained surplus	Actuarial adjustments	Reserves arising on IPSAS adjustments	Total
	3	£	£	£	£
Balance At 1 January 2022	2,394,996	(65,886,576)	(269,978,543)	(91,348,855)	(424,818,978)
Surplus arising on recognition of employee benefit obligation for 2022	-	-	229,219,520	-	229,219,520
Net use of Retained Surplus	-	(4,956,133)	-	-	(4,956,133)
Net (deficit) / surplus for the year	-	(18,669,759)	-	-	(18,669,759)
Balance At 31 December 2022	2,394,996	(89,512,468)	(40,759,023)	(91,348,855)	(219,225,350)

Notes to the financial statements for the year ended 31 December 2022

1. Statement of Compliance and Basis of Preparation

ECMWF elected to adopt International Public-Sector Accounting Standards (IPSAS) from 1 January 2012.

On 11th November 2014, ECMWF signed a Delegation Agreement with the European Commission for provision of Copernicus services. This was further extended by a contribution agreement signed in 2021. Consequently, ECMWF introduced segmental accounts in 2014, in line with IPSAS 18, to separately identify the various streams of income and expenditure relating to Copernicus Services, as this is regarded as a significant segment of activity.

On 15th December 2021, a contribution agreement was also signed with the EC for ECMWF to be a major partner in the implementation of the Destination Earth (DestinE) initiative together with ESA and EUMETSAT as partners. This will also be reported as a separate segment in these financial statements.

For consistency purposes, all externally funded streams of revenue and corresponding costs have also been separated by segment.

2. Accounting judgements and estimates

In the application of ECMWF's significant accounting policies, which are described in note 3, management is required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised, if the estimate affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

The key judgements management has made in preparing these financial statements are as follows:-

- a) Estimated useful lives and depreciation rates of property, plant and equipment.
- b) Actuarial assumptions in respect of the defined benefit pension and post- employment medical care schemes;
- c) Assessment of contract progression at the year-end date.

Basis of Accounting

The financial statements are prepared in accordance with and comply with International Public-Sector Accounting Standards (IPSAS) issued by the International Public Sector Accounting Standards Board (IPSASB), based on International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB).

When the IPSASB does not prescribe any specific standard, IFRS and IAS are applied.

The financial statements have been prepared on a historical-cost and going-concern basis, and accounting policies have been applied consistently throughout the period. The financial statements have been prepared on an accruals basis.

All accounting entries are recorded to 2 decimal places, but for presentation purposes the numbers in the Financial Statements, including totals and subtotals, are rounded to the nearest pound, and therefore may not add up due to rounding.

3. Significant Accounting Policies

The significant accounting policies are set out below:

Foreign Currencies

Assets and liabilities denominated in foreign currencies are translated into the functional currency, Sterling, at the exchange rates prevailing at the date of the Statement of Financial Position. Foreign currency transactions within the ledgers are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Exchange gains and losses resulting from settlement of such transactions and from retranslation at the reporting date of assets and liabilities denominated in foreign currencies, are recognised in the Statement of Financial Performance.

Member and Co-operating States' contributions and contributions to optional programmes are payable in Sterling. Revenue from Externally Funded Projects, Third Party Activities (including Copernicus and Destination Earth), Sales of Forecasts and Data and other operating revenue is received in a number of currencies, principally Euro.

Tangible Assets

Property, plant and equipment are stated at historical cost less accumulated depreciation and any impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the assets.

Where an asset (other than land and buildings) is acquired in a non-exchange transaction for a nil or nominal consideration the asset is initially recognised at fair value, where fair value can be reliably determined and as income in the Statement of Financial Performance.

Subsequent costs are included in the asset's carrying value or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to ECMWF and the cost of the item can be reliably measured. The carrying amount of a replaced item is derecognised. All repair and maintenance expenditure is charged to the Statement of Financial Performance during the financial period in which it is incurred.

Project costs relating to the relocation of the Data Centre have not been capitalised and have been recognised in the Statement of Financial Performance as they are incurred.

Depreciation on assets is charged to write off the cost of assets less their residual value, other than land, over their estimated useful economic lives, using the straight-line method on the following basis:

- Building improvements
 15 50 years
- Infrastructure, Plant & Machinery
 - Fixtures and fittings 3 10 years
 - Technical equipment 3 10 years
 - Mechanical equipment 3 10 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

The value of Land represents the cost price of Keepers Cottage, which was purchased by the Centre some years ago.

The carrying values of tangible assets are reviewed for impairment if events or changes in circumstances indicate that they may be impaired. If any such indication exists, the recoverable amount of the asset will be estimated in order to determine the extent of the impairment loss (if any). Any provision for impairment is charged to the Statement of Financial Performance.

ECMWF occupies land and buildings provided by the Government of the United Kingdom (UK Government) at no cost under a Headquarters Agreement dated 11 October 1973 and amended 11 July 1997. In June 1999, the terms of the agreement were extended for a further 20 years and in June 2019 the terms were extended for a further 10 years.

The UK Government has sole title to the original land and buildings and under the terms of the agreement has responsibility for the maintenance of the exterior of the buildings with ECMWF responsible for the maintenance of the interior of the buildings. ECMWF has therefore, not recognised any value of these buildings in the Statement of Financial Position.

ECMWF have built extensions to the existing buildings, financed by Member States' and Co-operating States' contributions. The Headquarters Agreement provides for the payment of a sum equivalent to the difference between the value of the premises with any new additions and new buildings and the value of the premises without the same at the end of the term of occupation. Therefore, depreciation on building improvements is based upon residual (estimated) values when the current Headquarters Agreement expires in 2029.

ECMWF also has duty stations in Bologna, Italy and in Bonn, Germany.

In Germany, ECMWF temporarily occupies office space provided by the Government of the Federal Republic of Germany until the Centre will eventually be provided with permanent premises (currently projected to April 2027). A Hosting Agreement between ECMWF and Germany has been concluded, but not yet in force.

The basis for the occupation of office space is presently mainly the "Use and Occupation Agreement" between ECMWF and the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV; formerly BMU) dated 15 July 2021. ECMWF uses the offices at no cost except partial operating and user-specific maintenance costs. The German Government has sole title to the land and, with that, to the building in which the temporary office space is located.

In Italy, ECMWF occupies land and building provided by the Government of the Italian Republic free of charge under a Hosting Agreement dated 22 June 2017 within the "Tecnopolo di Bologna" (the Premises). The terms of the occupation of these Premises are set out in the "Supplementary Agreement between the Government of the Italian Republic and Regione Emilia-Romagna on the one hand and the ECMWF, on the other, concerning the premises of the Centre located in Italy" dated 22 June 2017. Accordingly, the initial period of occupancy is 25 years.

The Premises are owned by the Region Emilia-Romagna. The Region will be responsible for the repair, redecoration and other maintenance of

- land, buildings and infrastructure external to the Premises, but inside the Tecnopolo;
- the exterior of the Premises; and
- the external structural elements of the Premises.

ECMWF shall be responsible for all other repair and maintenance of the Premises during the occupancy.

Inventories

Inventories are stated at the lower of cost and net realisable value on a first in first out (FIFO) basis. Cost comprises all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling price less the estimated costs of completion and costs to be incurred in marketing, selling and distribution for those asset items that may be sold to third parties. These inventories relate to the stock of unused tapes which will form part of the Centre's data archive and which, once used, are expensed in the Statement of Financial performance.

Receivables

Receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts. No allowances are made for loss with regards to contributions receivable from Member and Co-operating States, except for exceptional and/or technical reasons sanctioned by the Council. For all other receivables, an allowance for irrecoverable amounts will be based on a review of outstanding amounts at the reporting date.

Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and cash at bank and term deposits.

Provisions

Provisions exist when a liability arising from a past event exists, for which it is probable that an economic outflow will occur. Provisions are calculated using the management's best estimation of the expenditure required to settle the obligation at the reporting date.

Employee benefits/pension obligations

ECMWF operates two defined-benefit pension schemes and a post-employment medical care scheme. The International Service for Remunerations and Pensions (ISRP), in its capacity as the Centre's actuary, performs annual calculations of liabilities for the defined benefit and post-employment medical care schemes, which are recognised in the financial statements.

The annual actuarial valuations are carried out using the Projected Unit Credit Method, which attributes an additional unit of benefit entitlement for each period of service. Each unit is measured separately until the final obligation is constituted.

ECMWF's employee benefit obligations are partially funded by assets held separately and are distinct from all other assets of ECMWF. Historically, the cost of pensions was provided for each year on a pay-as-you-go basis, in common with many public-sector bodies across Europe. However, since 2011, the Centre has set aside funds each year to cover the full cost of its pension obligations for that year as determined by its actuaries, as well as some additional funds to reduce its overall long-term liability. The remainder of benefit is supported by Member States' obligations under the ECMWF convention.

Actuarial gains and losses are accounted for in compliance with IPSAS 39 and are recognised in the period during which they occur. They are recognised as a separate item directly in the Net Assets/Equity as per IPSAS 39.

Revenue recognition

ECMWF has several sources of revenue, which are accounted for as follows:

- Member and Co-operating States' contributions: (a) Member and Co-operating States' contributions are recognised in the period to which they relate.
- (b) Other income from Member and Co-operating States: Other income from Member and Co-operating States is recognised in the period to which it relates. This includes income from Optional Programmes.
- Income from Sales of Forecast and Data: (c) Income from the sales of forecasts and data is recognised in the period to which the revenues relate.
- (d) Income from Externally Funded Projects (EFP) and Third-Party Activities (TPA) excluding Copernicus (COP) and Destination Earth (DEST): Income from Externally Funded Projects is recognised in line with contractual arrangements. For contracts spanning more than one accounting/reporting period, income is recognised based on costs incurred in the period plus associated contracted mark-up.
- (e) Income from Third Party Activities: Copernicus (COP): Income from Copernicus Third Party Activity is recognised in line with the signed Contribution Agreement. Income related to industrial activities is recognised based on associated direct costs incurred in the period, and fee income in line with that agreed in the Contribution Agreement.
- (f) Income from Third Party Activities: Destination Earth (DEST): Income from Destination Earth Third Party Activity is recognised in line with the signed Contribution Agreement. Income related to industrial activities is recognised based on associated direct costs incurred in the period, and fee income in line with that agreed in the Contribution Agreement.

Leases

Assets acquired under finance leases are included in fixed assets at the total of the lease payments due over the life of the lease discounted at the rate of interest inherent in the lease. Lease payments are apportioned between the finance element, which is charged in the Statement of Financial Performance, and the capital element, which reduces the lease creditor. ECMWF did not have any finance leases in the period.

Leases in which a significant proportion of the risks and rewards are retained by the lessor are classified as operating leases. Operating lease rentals are recognised as an expense in the Statement of Financial Performance on the basis at which value is received by the organisation.

Should ECMWF invoke a liquidated damages clause in a contract, the costs of the lease are reduced by the amount receivable/received or as determined in any agreements with the lessor.

Financial risk management

ECMWF seeks to minimise its exposure to financial risk and has developed risk-management strategies in accordance with its Financial Regulations. ECMWF is exposed to a variety of financial risks, including foreign exchange, interest rate, liquidity and credit risks. ECMWF does not make use of financial derivatives to hedge foreign exchange risk exposures.

(a) Foreign exchange risk

ECMWF receives income from Externally Funded Projects, Sales of Forecast and Data and third-party activities in currencies other than Sterling and is, therefore, exposed to foreign exchange risks arising from fluctuations in currency rates.

Foreign exchange gains and losses resulting from settlement, or translation of year end monetary balances denominated in foreign currencies are recognised in the Statement of Financial Performance.

Foreign exchange gains and losses are presented within other finance costs in the Statement of Financial performance.

The Contribution Agreements signed with the European Commission for the provision of both Copernicus and Destination Earth Services are agreed in Euro. In order to minimise foreign exchange risk, all third-party procurements agreed are denoted in Euro and much of the in-house staffing costs relates to personnel based in Bonn which are also paid in Euro. Furthermore, costs incurred by ECMWF are reimbursed on a regular basis to minimise large fluctuations on foreign exchange rates between the date incurred and the date reimbursed.

(b) Interest rate risk

Interest rate risk arises from the impact of changes in the interest rates on the value of financial assets and obligations. ECMWF's exposure to interest rate risk is limited to

- the interest receivable on its bank deposits, pension assets and Member and Co-operating States' contributions.
- interest chargeable on Euro holdings

Whilst Euro deposits are unavoidable, ECMWF minimises these as much as possible to avoid unnecessary costs.

(c) Liquidity risk

ECMWF's Financial Regulations permit it to utilise bank credit facilities in case of liquidity requirements.

(d) Credit risk

Credit risk is the risk that one party to a financial instrument will fail to discharge on obligations and cause the other party to incur a financial loss. ECMWF is exposed to credit risk in its accounts receivable.

ECMWF has limited credit risk as its exposure is principally to sovereign states, the European Union and other international organisations.

4. Cash and cash equivalents	2022	2021
	£	£
Cash in hand	-	-
Current accounts	22,865,169	9,141,605
Deposit accounts	13,915,840	20,365,965
Project bank accounts*	13,077,698	377,405
Third Party activity bank account**	35,953,621	35,835,024
	85,812,237	65,719,999

^{*} This represents monies pre-financed from the European Commission for a number of projects for which ECMWF is the co-ordinator. Most of these funds will be transferred to the participants in early 2023.

** Cash received in advance from the European Commission for Copernicus Services and Destination Earth

5. Receivables*	2022	2021
Contributions	68,132	247,136
Sales of forecast and data debtors	5,029,366	3,630,619
VAT and other taxes	8,601,164	6,962,564
External project funding receivables	2,040,565	1,645,576
Miscellaneous receivables**	7,335,701	188,580
	23,074,928	12,674,476
*Receivables shown are net of debt provision ** This includes £6.6m relating to Atos liquidated damages		

6. Prepayments and accrued revenue	2022	2021
Other prepaid expenses	5,098,833	3,303,090
Accrued revenue; forecasts and data	235,259	413,542
	5,334,092	3,716,632

7. Inventories	2022	2021
Archive data media	1,082,954	757,778
	1,082,954	757,778

8. Property Plant & Equipm	nent				
	Land	Building Improve- ments	Infrastructure Plant & Machinery	WIP & Intangibles	2022
	£	£	3	3	£
Cost					
At 1 January 2022	750,000	7,685,173	38,020,544	-	46,455,717
Additions	-	-	2,161,034	126,398	2,287,432
Disposals	<u> </u>	<u> </u>	(1,771,199)		(1,771,199)
At 31 December 2022	750,000	7,685,173	38,410,378	126,398	46,971,950
Accumulated Depreciation					
At 1 January 2022	-	2,921,523	29,184,279	-	32,105,802
Disposals	-	-	(1,771,199)	-	(1,771,199)
Charge for the period	-	164,383	2,616,830	-	2,781,212
At 31 December 2022	-	3,085,906	30,029,910	-	33,115,816
Net book value					
At 1 January 2022	750,000	4,763,650	8,836,265	-	14,349,915
At 31 December 2022	750,000	4,599,267	8,380,469	126,398	13,856,134

9. Payables	2022	2021
	£	£
Suppliers and accrued charges	12,609,390	13,132,793
Members States' Fund	5,085,633	4,291,989
Provisions	1,286,392	1,247,453
Other payables	540,133	479,050
	19,521,549	19,151,285

10. Pre-financing	2022	2021
External project funding received in advance	5,739,845	5,972,915
Externally funded projects provisions	78,636	47,642
Externally funded projects - coordinator account	13,080,075	376,186
Third Party Programme funding received in advance*	29,231,955	25,995,708
	48,130,511	32,392,451

^{*}relates to pre-finance monies received from European Commission for provision of Copernicus and Destination Earth Services, net of costs incurred

11. Deferred revenue	2022	2021
Deferred revenue	3,157,041	2,296,533
	3,157,041	2,296,533

12. Employee benefits

Defined-benefit schemes

At 31 December 2022, the main actuarial assumptions used to calculate the defined-benefit liability (expressed as weighted averages) were:

	Pension benefits	Post- employment medical care	
	%	%	
Discount rates	4.74	4.74	
Salary inflation	3.02	0.00	
Price inflation	2.78	0.00	
Medical cost inflation	0.00	4.78	
	Pension benefits	Post- employment medical care	Total
	3	£	3
Present value of obligation at 01/01/2022	465,949,484	74,897,783	540,847,267
Interest cost	8,681,549	1,028,739	9,710,288
Current service cost	29,749,565	4,844,741	34,594,306
Benefits paid	(8,330,001)	(702,918)	(9,032,919)
Timing differences for leaving allowances	(68,195)	-	(68,195)
Actuarial gain on obligation	(189,205,621)	(40,013,899)	(229,219,520)
Net liability recognised in Statement of Financial Position	306,776,781	40,054,446	346,831,227

Overall, the pension obligation has decreased by GBP 159,172,703 during 2022 which is principally due to the increase in the discount rate over the year. Overall, the medical obligation has decreased by GBP 34,843,337 during 2022. This is principally due to the increase the discount rate.

Pension and Medical Inflation assumptions methodology was adjusted last year to give a market-based expectation using the Bank of England yield curve. However, the inflation yield curve provided by the Bank of England is for RPI inflation. For the 2021YE calculation, an adjustment of 0.7%, based on UK market practice, was deducted from RPI as the forward-looking gap between RPI and CPI to provide the CPI inflation. For the 2022YE the RPI-CPI difference has been reduced to 0.5% in line with actuarial advice. In November 2020, the UK government proposed an alignment of RPI and CPI from 2030 onwards. Therefore, as 2030 approaches it is to be expected that the RPI-CPI gap will disappear. The impact of this change in 2022 is £24,261,565 for the pension scheme and £5,176,786 for the post-employment medical care.

The table below shows the impact of these changes to the overall liability at the end of 2022:

		Pension scheme		Pension scheme Post-employment her		nt healthcare
Impact of change in:	Type of (gain)/loss	Amount	% of 2022 liability	Amount	% of 2022 liability	
Population	Experience	29,649,649	9.7%	641,388	1.6%	
Demographics	Assumption	16,984,236	5.5%	5,250,359	13.1%	
Inflation expectations	Assumption	(8,338,297)	(2.7%)	(250,141)	(0.6%)	
RPI-CPI differential	Assumption	24,261,565	7.9%	5,176,786	12.9%	
Discount rate	Assumption	(251,762,774)	(82.0%)	(50,832,290)	(126.9%)	
TOTAL		(189,205,621)	(61.7%)	(40,013,899)	(99.9%)	

12. Employee benefits (continued)

In accordance with IPSAS 39, a sensitivity analysis of the main actuarial assumptions is also included in the table below:

Pension scheme	Post- employment healthcare
4.7%	7.4%
(4.4%)	(6.7%)
(15.9%)	(24.5%)
20.7%	34.4%
2.6%	4.5%
(2.6%)	(4.5%)
	\$cheme 4.7% (4.4%) (15.9%) 20.7% 2.6%

Movement in Pension Investment Accounts

2022

Opening value of investment account at 01/01/2022	72,649,757
Return on investment during the period	(11,410,535)
Contributions by employer during the period	11,910,242
Contributions by staff & validation of pension rights during the period	4,370,197
Funds due to ECMWF	133,077
Timing differences for leaving allowances	(68,195)
Benefits paid during the period	(8,330,001)
Net asset recognised in Statement of Financial Position at 31/12/2022	69,254,543

Amounts recognised in the Statement of Financial Performance are as follows:

	Pension benefits	Post- employment medical care	Total
Pension and post-employment benefits	£	£	£
Current service cost	29,749,565	4,844,741	34,594,306
Staff contributions	(4,143,818)	-	(4,143,818)
Validation of pension rights	(226,379)	-	(226,379)
Benefits paid	-	(702,918)	(702,918)
Insurance premium paid	-	288,250	288,250
	25,379,368	4,430,073	29,809,441
Finance costs for post-employment benefit			
Interest on obligation	8,681,549	1,028,739	9,710,288
Increase in value of scheme assets in the year	11,410,535		11,410,535
	20,092,084	1,028,739	21,120,823

Current service cost is the increase in the present value of the defined benefit obligation resulting from employee services in the current period.

Interest on obligation is the increase during the period in the present value of the defined-benefit obligation which arises because the benefits are one period closer to settlement.

13. General Reserve		
	Opening Balance	Closing Balance
	£	£
General Reserve	2,394,996	2,394,996

14. IPSAS adjustment reserve	
	2012
The surplus arising from IPSAS adjustments are analysed as follows:	£
Net book value of infrastructure, plant and machinery at 1 January 2012	9,497,464
Net book value of land and buildings at 1 January 2012	7,439,160
	16,936,624
Net book value of inventories at 1 January 2012	530,430
Provision for leave not taken at 1 January 2012	(355,612)
Net employee benefits at 1 January 2012	(108,460,297)
	(91,348,855)

Personnel costs £ £ Salaries and benefits 26,907,313 24,310,225 Other personnel costs (incl. training) 2,675,855 2,150,229 Taxes 7,938,575 2,269,208 Total personnel costs 37,521,743 33,729,622 Total pension and post-employment benefits 29,809,441 27,994,254 Buildings expenditure 185,999 88,368 Installations and alterations 185,999 88,368 Rental and local taxes 250,340 73,024 Water, gas and electricity 7,989,922 6,466,711 Maintenance, cleaning and security 1,125,911 999,569 Total buildings expenditure 1,125,911 999,569 Hirring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,383 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 4,543,255 1,376,368 Funiture and equipment 4,543,255 <td< th=""><th>15. Expenditure</th><th>2022</th><th>2021</th></td<>	15. Expenditure	2022	2021
Salaries and benefits 26,907,313 24,310,225 Other personnel costs (incl. training) 2,675,855 2,150,228 Total personnel costs 37,521,743 33,729,662 Total pension and post-employment benefits 29,809,441 27,994,254 Buildings expenditure Installations and alterations 185,999 88,368 Bental and local taxes 250,340 73,024 Water, gas and electricity 7,898,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,568 Total buildings expenditure 3,461,722 7,617,762 Computer expenditure 4,667,11 4,667,11 Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,768,833 Telecommunications network 2,899,433 3,141,048 Other operating expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827		£	3
Other personnel costs (incl. training) 2,675,855 2,150,229 Taxes 7,988,575 7,269,208 Total personnel costs 37,521,743 33,729,662 Total pension and post-employment benefits 29,809,441 27,994,254 Buildings expenditure 185,999 88,368 Rental and local taxes 250,340 73,024 Water, gas and electricity 7,898,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 9,461,172 7,617,762 Computer expenditure 3,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 49,533 22,949 Total computer expenditure 49,533 22,949 Total computer expenditure 49,533 22,949 Uniformal expenditure 49,533 22,949 Uniformal expenditure 49,533 <			
Taxes 7,938,575 7,269,208 Total personnel costs 37,521,743 33,729,662 Total pension and post-employment benefits 29,809,441 27,994,254 Buildings expenditure Installations 185,999 88,368 Rental and local taxes 250,340 73,024 Water, gas and electricity 7,898,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 9,461,172 7,617,762 Computer expenditure 1,125,911 989,569 Maintenance and repair 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 64,001 Total computer expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances <td></td> <td></td> <td></td>			
Total personnel costs 37,521,743 33,729,662 Total pension and post-employment benefits 29,809,441 27,994,254 Buildings expenditure Installations and alterations 185,999 88,368 Rental and local taxes 250,340 73,024 Water, gas and electricity 7,999,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 3,817,461 7,340,582 Computer expenditure 2,555,313 3,915,620 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,933 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 5,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797	Other personnel costs (incl. training)		
Total pension and post-employment benefits 29,809,441 27,994,254 Buildings expenditure Installations and alterations 185,999 88,368 Bental and local taxes 250,340 73,024 Water, gas and electricity 7,898,922 6,466,711 Maintenance, clearing and security 1,125,911 989,569 Total buildings expenditure 9,461,72 7,617,762 Computer expenditure 1,125,911 989,569 Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 14,727,388 16,420,324 Other operating expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 <			
Installations and alterations 185,999 88,368 Rental and local taxes 250,340 73,024 Water, gas and electricity 7,898,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,559 Total buildings expenditure 9,461,72 7,617,762 Total buildings expenditure Water, gas and electricity 7,617,762 7,617,762 Total buildings expenditure Water, gas part of the water of t	Total personnel costs	37,521,743	33,729,662
Installations and alterations 185,999 88,368 Rental and local taxes 250,340 73,024 Water, gas and electricity 7,898,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 9,461,172 7,617,762 Computer expenditure Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Other operating expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 20,836 151,447 E	Total pension and post-employment benefits	29,809,441	27,994,254
Rental and local taxes 250,340 73,024 Water, gas and electricity 7,888,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 9,461,172 7,617,762 Computer expenditure 8,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,477 Governing bodies 200,836 151,477 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440)	Buildings expenditure		
Water, gas and electricity 7,898,922 6,466,711 Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 9,461,172 7,517,762 Computer expenditure 1 7,340,582 Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,513 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 1,916,825 646,091 Other operating expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,948 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 <	Installations and alterations	185,999	88,368
Maintenance, cleaning and security 1,125,911 989,569 Total buildings expenditure 9,461,172 7,617,762 Computer expenditure Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 24,18,641 Bad debt provision 36,694 (25,440) Other expenditure 4,884,717 3,430,543 Externally Funded Projects tax 1,415,051	Rental and local taxes	250,340	73,024
Total buildings expenditure 9,461,172 7,617,762 Computer expenditure Firing and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Uniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,43 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 48,427 22,434 Total other operating expenditure 4,564,884 4,587,435	Water, gas and electricity	7,898,922	6,466,711
Computer expenditure Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 14,727,388 16,420,324 Other operating expenditure Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad deb provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 E	Maintenance, cleaning and security	1,125,911	989,569
Hiring and leasing 5,817,461 7,340,582 Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 49,533 22,949 Uther operating expenditure 54,598 50,827 Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 26,842 22,434 Total other operating expenditure 48,477 3,430,543 Externally Funded Projects 4,564,884 4,587,435	Total buildings expenditure	9,461,172	7,617,762
Maintenance and repair 2,555,313 3,915,620 Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 14,727,388 16,420,324 Other operating expenditure Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 <td>Computer expenditure</td> <td></td> <td></td>	Computer expenditure		
Supplies - computer and associated equipment 1,548,355 1,376,983 Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 14,727,388 16,420,324 Other operating expenditure 8 16,420,324 Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,11,30,51 1,436,761 <tr< td=""><td>Hiring and leasing</td><td>5,817,461</td><td>7,340,582</td></tr<>	Hiring and leasing	5,817,461	7,340,582
Telecommunications network 2,889,433 3,141,048 Other computing expenditure 1,916,825 646,091 Total computer expenditure 14,727,388 16,420,324 Other operating expenditure Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 <td>Maintenance and repair</td> <td>2,555,313</td> <td>3,915,620</td>	Maintenance and repair	2,555,313	3,915,620
Other computing expenditure 1,916,825 646,091 Total computer expenditure 14,727,388 16,420,324 Other operating expenditure 49,533 22,949 Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,751 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities	Supplies - computer and associated equipment	1,548,355	1,376,983
Total computer expenditure 14,727,388 16,420,324 Other operating expenditure 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus tax	Telecommunications network	2,889,433	3,141,048
Other operating expenditure 49,533 22,949 Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 34,6757 452,680 Copernicus 24,4	Other computing expenditure	1,916,825	646,091
Furniture and equipment 49,533 22,949 Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth <t< td=""><td>Total computer expenditure</td><td>14,727,388</td><td>16,420,324</td></t<>	Total computer expenditure	14,727,388	16,420,324
Stationery, supplies, etc. 54,598 50,827 Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Exper fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456			
Postal, delivery, communications, etc. 15,813 20,946 Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 <td></td> <td>49,533</td> <td>22,949</td>		49,533	22,949
Miscellaneous insurances 282,201 236,799 Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363			50,827
Publications and training 815,276 421,797 Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Postal, delivery, communications, etc.	15,813	
Governing bodies 200,836 151,447 Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Miscellaneous insurances	282,201	
Expert fees 119,572 110,143 Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	· ·		
Depreciation 2,781,212 2,418,641 Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Governing bodies	200,836	151,447
Bad debt provision 36,694 (25,440) Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Expert fees	119,572	110,143
Other expenditure 28,442 22,434 Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Depreciation	2,781,212	2,418,641
Total other operating expenditure 4,384,717 3,430,543 Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Bad debt provision	36,694	(25,440)
Externally Funded Projects 4,564,884 4,587,435 Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Other expenditure	28,442	22,434
Externally Funded Projects tax 1,413,051 1,436,761 Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Total other operating expenditure	4,384,717	3,430,543
Optional Programmes 323,188 172,844 Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363			
Optional Programmes tax 100,971 57,027 Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Externally Funded Projects tax	1,413,051	1,436,761
Third Party Activities 1,264,901 1,486,344 Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Optional Programmes	323,188	172,844
Third Party Activities tax 346,757 452,680 Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Optional Programmes tax		57,027
Copernicus 24,493,929 36,194,097 Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Third Party Activities	1,264,901	1,486,344
Copernicus tax 2,092,103 2,038,192 Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Third Party Activities tax	346,757	452,680
Destination Earth 4,169,984 7,084 Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363	Copernicus	24,493,929	36,194,097
Destination Earth tax 1,085,456 1,899 Total externally funded expenditure 39,855,224 46,434,363			
Total externally funded expenditure 39,855,224 46,434,363			
		1,085,456	
Total expenditure 135,759,145 135,626,907	Total externally funded expenditure	39,855,224	46,434,363
	Total expenditure	135,759,145	135,626,907

15. Expenditure (continued)

Internal tax:

Article 15 of the protocol states "......the staff members of the Centre shall, within the limits provided for in this Protocol, be subject to a tax for the benefit of the Centre on salaries, wages and emoluments paid by the Centre". The Centre, therefore, deducts an "internal" tax from all salaries paid to staff. This "internal" tax deducted is treated as income by the Centre.

Staff salaries are quoted net of tax and grossed up prior to payment where upon Centre tax is then deducted. This grossed-up amount is shown in personnel costs (including personnel costs within Externally Funded Projects, Optional Programmes and Third Party Activities).

15. Expenditure (continued)	2022	2021
	£	£
Revenue		
Internal tax	12,976,912	11,255,767
Total tax included in revenue	12,976,912	11,255,767
Expenditure		
Tax included in personnel	7,938,575	7,269,208
Tax included in externally funded projects	1,413,051	1,436,761
Tax included in Optional Programmes	100,971	57,027
Tax included in Third Party Activities	346,757	452,680
Tax included in Copernicus	2,092,103	2,038,192
Tax included in Destination Earth	1,085,456	1,899
Total tax included in expenditure	12,976,912	11,255,767

16. Finance Costs	2022	2021
	£	£
Interest income from overdue contributions	46,185	20,963
Interest income from bank	246,803	12,253
Net foreign exchange income	1,338,904	-
Total finance income	1,631,892	33,216
Net foreign exchange cost	-	1,214,114
Pension and post-employment benefit costs (note 12)	21,120,823	6,259,689
Bank charges	81,820	175,209
Member States interest	24,544	-
Total finance costs	21,227,187	7,649,011

17. Segment reporting - Statement of Financial Performance

IPSAS 18 'Segment Reporting' requires entities to report on segments on a basis appropriate for assessing the entity's past performance in achieving the objectives and for making decisions about the future allocation of resources.

The Centre has a clear objective to provide the best possible forecast products to its Member States.

The following activities have been separated by segment:

- Core Activities
- Externally Funded Projects
- Optional Programme
- Third Party Activities excluding Copernicus
- Third Party Activities Copernicus only
- Third Party Activities Destination Earth only

Additional information is available in Notes 25 & 26.

18. Reconciliation of IPSAS financial reporting to cash results.

The following table combines IPSAS and cash financial reporting. The significant aspect of the financial reporting under IPSAS is the application of the accrual accounting principle with regard to expenses and revenues, pension benefits and other personnel costs, fixed assets and related depreciation. Cash accounting is based on recognition of transactions when there are cash movements.

In order to reconcile this to the cash results, differences between accrual and cash accounting need to be taken into account. These differences can be attributable to timing, or they can constitute permanent differences. The most significant of these differences are the following:

- (a) In cash accounting, revenue is required to cover all committed expenditures. In accrual accounting, revenue and expenses include amounts accruing for the reporting period, other committed expenses or revenue are treated as deferred.
- (b) In cash accounting, capital expenditures are recorded as current-year expenses. In accrual accounting, the expense is capitalised and depreciated over the useful lives of the assets. The capital expenditure and associated depreciation are recorded at their net value as assets in the Statement of Financial Position. Depreciation expense in the year is recorded in the Statement of Financial Performance.
- (c) In accrual accounting, the expense for both pensions and post-employment health cover is estimated by an actuary in accordance with a methodology set out in accounting standard IPSAS 25. The pension and post-employment medical care benefits obligation is reported in the Statement of Financial Position as detailed in note 12.
 - In cash accounting, pension and post-employment medical care scheme expenditure is accounted for on a payas-you-go basis. For pension benefits, the budgetary contributions are estimated on an actuarial basis to represent the long-term cost of the benefits provided.

The following table shows the reconciliation of IPSAS financial reporting to cash results:

	2022	2021
	£	£
Net deficit for the year from continuing operations as per the Statement of Financial Performance	(18,669,759)	(12,109,267)
Adjustment for assets capitalised in the year	(2,287,432)	(4,136,118)
Adjustment for depreciation in the year	2,781,212	2,418,641
Adjustment for spend against commitments brought forward from 2020	8,818,318	3,787,669
Adjustment for commitments carried forward to 2022	(11,479,567)	(8,818,318)
Adjustment for finance costs for post-employment benefit (note 12)	21,120,823	6,259,689
Adjustment for post-employment benefit	17,599,325	16,756,898
Adjustment for accruals	(1,463,491)	2,914,508
Adjustment for prepayments	142,114	284,657
Adjustment for change in inventory	(325,176)	(152,979)
Adjustment for change in leave not taken	38,939	(39,564)
Other IPSAS timing differences	(8,133)	9,450
Revenue and expenditure account surplus per cash accounts	16,267,174	7,175,267

19. Contingencies and capital commitments

ECMWF has no contingent assets and no quantifiable contingent liabilities at 31 December 2021. However, in accordance with IPSAS 19: Provisions, Contingent Liabilities and Contingent Assets, ECMWF has two unquantifiable contingent liabilities; one relating to a claim received from a company which was previously a customer, and one potential claim from a software provider. These claims are currently being dealt with by the organisation.

ECMWF has contracted capital expenditure of £5,620,335 in 2022 (2021: £1,124,442) but not yet incurred as at 31 December 2022, c£3.3m of which related to purchases for the Common Cloud Infrastructure.

20. Operating lease commitments	2022	2021
	£	£
Within 1 year		
HPC service contract ¹	-	2,923,362
ATOS Implementation ²	-	716,075
ATOS Service Contract ²	3,092,041	2,061,361
SocGen Operating Lease ²	8,947,567	5,965,045
Konica Minolta Business Solutions ³	8,402	11,836
Konica Minolta Business Solutions ⁴	9,980	12,019
Portakabin Ltd ⁵	31,698	34,580
De Lage Landen International B.V ⁶ .	8,727	-
In 2 to 5 years inclusive		
ATOS Service Contract ²	9,963,242	14,429,523
SocGen Operating Lease ²	28,831,049	41,755,313
Konica Minolta Business Solutions ³	-	8,285
Konica Minolta Business Solutions ⁴	-	9,980
Portakabin Ltd ⁵	-	31,698
De Lage Landen International B.V ⁶	13,258	-
	50,905,964	67,959,077

- 1. A contract was entered into with Cray UK Ltd to cover the operational period of the High Performance Computer from 1 October 2014 to 30 September 2018 (initially agreed as 1 July 2014 - 30 June 2018 and subsequently moved by 3 months), In 2015, this lease was extended until 30 September 2020 with an extension to 30th September 2021. Prices were negotiated to end of 2022 and lease was extended by 1 or 3 months at any time. Final extension was to 31 October 2022.
- 2. Contract signed in December 2019 for New High-Performance Computer with ATOS and SocGen replacing the Cray HPC. Service contract and operating lease planned commencement from September 1st 2021 following implementation and acceptance testing of the HPC. The implementation is complete and subsequent operation has been delayed with an expected commencement date of April 1st 2023. Current contract end date 30 May 2026.
- 3. Konica lease agreement has been extended from 13th September 2021 to 12th September 2023 related to Multi-Function Devices (MFDs).
- 4. One lease agreement for photocopier rental was entered into during 2020 with Konica Minolta Business Solutions Ltd, for 36 months from 30th October 2020 to 29th October 2023. Additional devices added in 2021 so increased cost.
- 5. A 5-year lease was entered into during 2018 with Portakabin Ltd to accommodate staff moving from Reading Enterprise Centre to the main Shinfield site and covers the period from December 2018 to November 2023.
- 6. A lease agreement with De Lage Landen International B.V. was entered into on 8th July 2022 for 36 months for Gym Equipment in the Bologna facility.

21. Personnel

The average number of personnel employed by the Centre in 2022 was 406 (2021: 377).

22. Key management personnel

ECMWF was established by a Convention that entered into force on 1 November 1975 (amended June 2010). The organisational structure of ECMWF comprises the Council and the Director-General with six committees assisting this structure.

In accordance with IPSAS 20 'Related Party Disclosures' key management personnel have been identified as follows:

- Director-General and other directors
- Senior managers

The aggregate remuneration for those key management personnel was as follows:

	Number of individuals 2022	Aggregate 2022	Number of individuals 2021	Aggregate 2021
		£		£
The Director-General and other directors	7	1,539,200	6	1,202,035
Senior managers	10	1,701,482	9*	1,454,412
Total key management personnel	17	3,240,682	15	2,656,448

There was no other remuneration or compensation to key management personnel or their close family members.

23. Related party transactions

There were no material transactions with related parties during the year 2022.

There were no loans to key management personnel or their close family members that were not available to other categories of staff.

Due to its status as an international organisation and the rules of its Convention, the Centre does not consider its Member States to be related parties.

^{*} the numbers for Senior Managers include one individual who departed in September 2021 and was replaced in January 2022.

24. Statement of Financial Performance by Segment as at 31 December 2022

Notes: Costs which are directly attributable to these activities are allocated to Segments. Support costs are allocated to Core, however the revenue received is still shown in the relevant segment.

		Core A	Activities	Externally Funded Projects		Optional Pr	Optional Programme		Third Party Activities (excl Copernicus & DE)		y Activities cus only)*	Third Party (Destination I		ECMWF Consolidated	
	Notes	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Revenue		3	3	£	£	£	3	£	£	£	£	£	£	£	£
Member & Co-operating States' Contributions		54,663,537	51,217,309											54,663,537	51,217,309
Externally funded revenue				5,739,693	5,820,327	405,779	212,643	1,774,125	2,077,090	26,753,149	39,215,575	4,699,282	7,964	39,372,029	47,333,599
Management fee for Programmes***										3,077,681	1,732,522	1,349,143	48,751	4,426,824	1,781,27
Sales of forecasts and data		12,892,873	12,072,971											12,892,873	12,072,97
Other operating revenue		12,352,505	7,472,517											12,352,505	7,472,517
Total operating revenue excluding taxes		79,908,915	70,762,796	5,739,693	5,820,327	405,779	212,643	1,774,125	2,077,090	29,830,829	40,948,097	6,048,425	56,715	123,707,768	119,877,668
Гaxes														12,976,912	11,255,767
Total operating revenue including Taxes														136,684,680	131,133,435
Expenditure															
Personnel costs	15	29,583,168	26,460,454	4,480,126	4,554,839	323,188	172,844	1,164,210	1,410,816	7,239,607	7,168,312	3,542,423	5902	46,332,722	39,773,166
Pension and post- employment benefits	12 & 15	29,809,441	27,994,254											29,809,441	27,994,254
Buildings expenditure	15	9,461,172	7,617,762											9,461,172	7,617,762
Computer expenditure	15	13,318,727	14,368,360	49,764	500			100,691	71,021	1,190,343	2,058,981	230,066		14,889,591	16,498,863
Other operating expenditure	15	4,384,177	3,430,543	34,994	32,096				4,507	80,612	182,796	24,379	1,182	4,524,162	3,651,124
Procured Industrial Activities										17,163,895	28,835,972	601,248		17,765,143	28,835,972
Total expenditure excluding taxes		86,556,685	79,871,372	4,564,884	4,587,435	323,188	172,844	1,264,901	1,486,344	25,674,458	38,246,061	4,398,116	7,084	122,782,233	124,371,140
Taxes														12,976,912	11,255,767
Total operating expenditure including taxes														135,759,145	135,626,907
Operating surplus / deficit) for the period from continuing operations														925,536	(4,493,472
inance income														1,631,892	33,216
Finance costs	16													(21,227,187)	(7,649,011
Net (deficit) for the period from continuing operations														(18,669,759)	(12,109,267)
Net (deficit) for the period														(18,669,759)	(12,109,267)

^{*} There is a separate schedule 24b splitting out COP1.0 and COP2.0

** Costs are classified according to segment and in some cases may vary in classification to that on the Statement of Financial Performance

*** Management fee for Copernicus Services received by ECMWF, to cover support costs in line with the Copernicus and Destination Earth Contribution Agreements.

25. Statement of Financial Position by Segment as at 31 December 2022

		Core Activities			Externally Funded Optional Programme Projects		Third Party Activities (excl Copernicus and DE)		Third Party Activities (Copernicus only)*		Third Party Activities (Destination Earth only)		ECMWF Consolidated		
	Note	2022 £	2021	2022	2021 £	2022	2021	2022	2021 £	2022	2021 £	2022	2021 £	2022	2021
Assets		£	£	£	L	£	£	£	£	£	£	£	£	£	£
Current Assets**															
Cash & cash equivalents	4	36,781,008	29,513,599	13,077,698	377,405					16,408,088	27,939,575	19,545,533	7,889,420	85,812,327	65,719,999
Receivables	5	21,034,362	11,028,899	2,040,565	1,645,576									23,074,928	12,674,476
Prepayments and accrued revenue	6	2,145,634	2,432,341		18,939		2,090		4,400	1,297,665	1,250,900	1,890,793	7,963	5,334,092	3,716,632
Inventory	7	1,082,954	757,778											1,082,954	757,778
Total current assets		61,043,959	42,732,617	15,118,263	2,041,920		2,090		4,400	17,705,753	29,190,475	21,436,326	7,897,383	115,304,301	82,868,885
Non-current assets							·			, ,	, ,				
Property, plant and equipment	8	13,856,134	14,349,915											13,856,134	14,349,915
Pension investment accounts		69,254,543	72,649,757											69,254,543	72,649,757
Total non-current		83,110,677	86,999,672	-	-	-	-	-	-	-	-	-	-	83,110,677	86,999,672
assets TOTAL ASSETS		144,154,637	130,732,289	15,118,263	2,041,920	-	2,090	-	4,400	17,705,753	29,190,475	21,436,326	7,897,383	198,414,979	169,868,557
LIABILITIES															
Current liabilities															
Payables	9	10,169,598	11,549,425	99,952	147,671	11,078	10,531	36,244	33,353	8,668,263	7,409,124	536,414	1,182	19,521,549	19,151,285
Pre-financing	10	10,100,000	11,010,120	18,898,556	6,396,743	11,070	10,001	00,211	00,000	8,436,982	18,106,288	20,794,973	7,889,420	48,130,511	32,392,451
Deferred revenue	11	3,157,041	2,296,533	,,	2,222,12					-, ,		,,	.,,	3,157,041	2,296,533
Total current liabilities		13,326,639	13,845,958	18,998,508	6,544,413	11,078	10,531	36,244	33,353	17,105,245	25,515,412	21,331,387	7,890,602	70,809,101	53,840,268
Non-current liabilities		, ,	•	, ,	, ,	,	,	,	•	, ,	, ,	, ,	, ,	, ,	, ,
Employee benefits		346,831,227	540,847,267											346,831,227	540,847,267
Total non-current liabilities		346,831,227	540,847,267		-		-	-				-	-	346,831,227	540,847,267
TOTAL LIABILITIES		360,157,866	554,693,225	18,998,508	6,544,413	11,078	10,531	36,244	33,353	17,105,245	25,515,412	21,331,387	7,890,602	417,640,329	594,687,535
NET (LIABILITIES)		(216,003,230)	(423,960,937)	(3,880,245)	(4,502,494)	(11,078)	(8,441)	(36,244)	(28,953)	600,507	3,675,064	104,939	6,782	(219,225,350)	(424,818,978)
General reserve	13		· ,,,		())		(-,,		(= , = - ,					2,394,996	2,394,996
Retained surpluses														(70,842,709)	(53,777,309)
Net surplus/(deficit) for the period														(18,669,759)	(12,109,267)
Actuarial adjustments														(40,759,023)	(269,978,543)
IPSAS adjustment reserve	14													(91,348,855)	(91,348,855)
TOTAL NET LIABILITIES														(219,225,350)	(424,818,978)

^{*} There is a separate schedule 25b splitting out COP1.0 and COP2.0

^{**}Cash & Cash equivalents have been restated to reflect the balances in the Programme funding accounts as pre finance from the European Commission

24b. Statement of Financial Performance by Segment (with Copernicus detail) as at 31 December 2022

			ty Activities P1.0*	Third Party COP		Third Party Activities (Copernicus only)		
	Notes	2022	2021	2022	2021	2022	2021	
Revenue		3	3	£	3	3	£	
Member & Co-operating States' Contributions								
Externally funded revenue		(6,193)	32,937,936	26,759,342	6,277,638	26,753,149	39,215,575	
Management fee for Programmes**		(369)	1,220,392	3,078,050	512,130	3,077,681	1,732,522	
Sales of forecasts and data								
Other operating revenue								
Total operating revenue excluding taxes		(6,562)	34,158,328	29,837,391	6,789,768	29,830,829	40,948,097	
Expenditure								
Personnel costs	15	(1,626)	5,256,295	7,241,233	1,912,017	7,239,607	7,168,312	
Pension and post- employment benefits	12 & 15							
Buildings expenditure	15							
Computer expenditure	15	1,805	1,209,811	1,188,539	849,170	1,190,343	2,058,981	
Other operating expenditure	15	6,049	102,458	74,564	80,338	80,612	182,796	
Procured Industrial Activities		(10,616)	25,417,007	17,174,511	3,418,964	17,163,895	28,835,972	
Total expenditure excluding taxes		(4,388)	31,985,572	25,678,847	6,260,489	25,674,458	38,246,061	

^{*}Since 2014, ECMWF has operated two services from the European Union's Copernicus Earth observation programme. The first phase up to 2021 is known as COP1.0.
**Participation in the European Union's Copernicus Earth observation programme was renewed in July 2021 covering the period up to

^{2028.} This phase is referred to as COP2.0.

25b. Statement of Financial Position by Segment (with Copernicus detail) as at 31 December 2022

			y Activities P1.0*		ty Activities P2.0**	Third Party Activities (Copernicus only)		
	Note	2022	2021	2022	2021	2022	2021	
		£	£	£	£	£	£	
Assets Current Assets***								
Cash & cash equivalents	4	258,771	7,498,433	16,149,316	20,441,142	16,408,088	27,939,575	
Receivables	5	250,771	7,430,400	10,143,310	20,441,142	10,400,000	21,303,313	
Prepayments and	3							
accrued revenue	6		1,805	1,297,665	1,249,095	1,297,665	1,250,900	
Inventory	7							
Total current assets	•	258,771	7,500,238	17,446,981	21,690,237	17,705,753	29,190,475	
Non-current assets								
Property, plant and equipment	8							
Pension investment accounts								
Total non-current assets	-	-	-	-	-	-	-	
TOTAL ASSETS		258,771	7,500,238	17,446,981	21,690,237	17,705,753	29,190,475	
LIABILITIES								
Current liabilities								
Payables	9		2,571,126	8,668,263	4,837,998	8,668,263	7,409,124	
Pre-financing	10	258,771	247,551	8,178,211	17,858,737	8,436,982	18,106,288	
Deferred revenue	11							
Total current liabilities	-	258,771	2,818,677	16,846,474	22,696,735	17,105,245	25,515,412	
Non-current liabilities								
Employee benefits								
Total non-current liabilities		-	-	-	-	-	-	
TOTAL LIABILITIES		258,771	2,818,677	16,846,474	22,696,735	17,105,245	25,515,412	
NET ASSETS		-	4,681,561	600,507	(1,006,498)	600,507	3,675,064	

^{*}Since 2014, ECMWF has operated two services from the European Union's Copernicus Earth observation programme. The first phase up to 2021 is known as COP1.0.

^{**}Participation in the European Union's Copernicus Earth observation programme was renewed in July 2021 covering the period up to 2028. This phase is referred to as COP2.0.

^{***}Cash & Cash equivalents have been restated to reflect the balances in the Programme funding accounts as pre finance from the European Commission



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