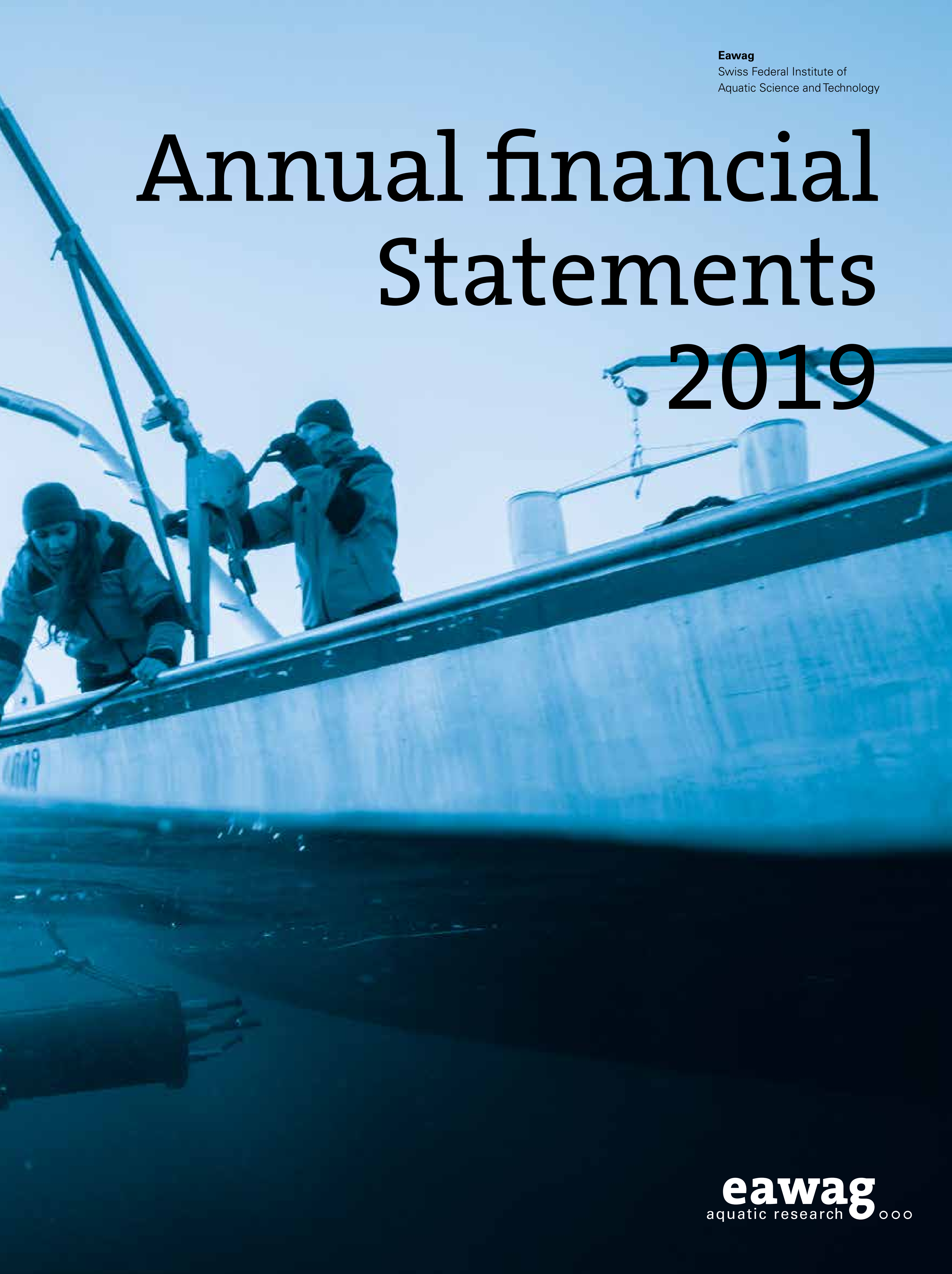

Eawag
Swiss Federal Institute of
Aquatic Science and Technology

Annual financial Statements 2019

eawag
aquatic research

Imprint

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The Annual Financial Statements are published in German (the authentic version) and also in English and French.

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Annual financial Statements

Rounding differences: the figures presented in this document may not add up precisely to the total amounts presented in the tables. Changes are calculated on unrounded amounts and may differ from a figure that is based on the rounded amounts presented in the tables.

Statement of financial performance

CHF 1,000	**2019**	**2018**	**Notes**
Federal financial contribution	49,912	59,007	
Federal contribution to accommodation	3,625	4,485	
Total federal contribution	53,537	63,492	5
Continuing education	129	96	6
Swiss National Science Foundation (SNSF)	5,441	5,858	
Swiss Innovation Agency (Innosuisse)	281	311	
Special federal funding of applied research	4,741	5,091	
EU Framework Programmes for Research and Innovation (FP)	1,477	1,917	
Industry-oriented research (private sector)	837	763	
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)	3,481	3,308	
Research contributions, mandates and scientific services	16,259	17,249	7
Other revenue	722	735	8
Operating revenue	**70,646**	**81,572**	
Personnel expenses	55,169	53,660	9, 21
Other operating expenses	19,339	19,857	10
Depreciation	3,686	3,654	16
Transfer expenses	144	345	11
Operating expenses	**78,339**	**77,517**	
Operating result	**−7,693**	**4,055**	
Net finance income/expense	−8	−57	12
Surplus (+) or deficit (–)	**−7,700**	**3,997**	

Balance sheet

CHF 1,000	31.12.2019	31.12.2018	Notes
Current assets			
Cash and cash equivalents	62,506	63,681	13
Current receivables from non-exchange transactions	7,773	10,528	14
Current receivables from exchange transactions	861	687	14
Current financial assets and loans	25,228	25,228	17
Prepaid expenses and accrued income	2,011	3,368	15
Total current assets	**98,378**	**103,492**	
Non-current assets			
Property, plant and equipment	20,494	22,203	16
Intangible assets	–	–	16
Non-current receivables from non-exchange transactions	4,360	6,329	14
Total non-current assets	**24,854**	**28,532**	
Total assets	123,232	132,024	
Liabilities			
Current liabilities	4,531	2,577	18
Accrued expenses and deferred income	1,527	1,729	19
Short-term provisions	2,850	2,730	20
Short-term liabilities	8,908	7,036	
Dedicated third-party funds	16,257	21,126	22
Net defined benefit liabilities	55,965	51,663	21
Long-term provisions	2,030	1,885	20
Long-term liabilities	74,252	74,674	
Total liabilities	**83,160**	**81,710**	
Equity			
Valuation reserves	–33,127	–30,585	
Dedicated reserves	21,476	19,146	
Free reserves	56,524	70,890	
Accumulated surplus (+)/deficit (–)	–4,802	–9,137	
Total equity	**40,071**	**50,314**	
Total liabilities and equity	123,232	132,024	

Statement of changes in equity

CHF 1,000	**Valuation reserves**	Teaching and research reserves	Infrastructure and administration reserves	**Dedicated reserves**	**Free reserves**	**Accumulated surplus (+)/deficit (–)**	**Total equity**
2018							
Value as of 01.01.2018	**–25,954**	**15,495**	**–**	**15,495**	**70,446**	**–9,040**	**50,947**
Surplus (+) or deficit (–)						3,997	**3,997**
Items directly recognised in equity: Revaluation of defined benefit liability	–4,631						**–4,631**
Increase (+)/decrease (–) in reserves	–	1,451	2,200	3,651	443	–4,095	**–**
Total changes	*–4,631*	*1,451*	*2,200*	*3,651*	*443*	*–97*	***–634***
Value as of 31.12.2018	**–30,585**	**16,946**	**2,200**	**19,146**	**70,890**	**–9,137**	**50,314**
2019							
Value as of 01.01.2019	**–30,585**	**16,946**	**2,200**	**19,146**	**70,890**	**–9,137**	**50,314**
Surplus (+) or deficit (–)						–7,700	**–7,700**
Items directly recognised in equity: Revaluation of defined benefit liability	–2,542						**–2,542**
Increase (+)/decrease (–) in reserves		–41	2,370	2,329	–14,365	12,036	**–**
Total changes	*–2,542*	*–41*	*2,370*	*2,329*	*–14,365*	*4,335*	***–10,242***
Value as of 31.12.2019	**–33,127**	**16,906**	**4,570**	**21,476**	**56,524**	**–4,802**	**40,071**

As hedge accounting is not applied at Eawag, no items are recognised under the reserves from hedging transactions.

As a result of groundwater problems, the Flux construction project was delayed by about three months. For this reason, the infrastructure and administration reserves were increased once again, by CHF 2.4 m.

The decrease of CHF 14.4 m in free reserves includes CHF 7.7 m additionally released in order to reduce the accumulated deficit.

Cash flow statement

CHF 1,000	**2019**	**2018**	**Notes**
Cash flows from operating activities			
Surplus (+) or deficit (–)	**–7,700**	**3,997**	
Depreciation	3,686	3,654	16
Net finance income/expense (non-cash)	–	–	12
Increase/decrease in net working capital	5,691	80	
Increase/decrease in net defined benefit liabilities	1,760	2,348	21
Increase/decrease in provisions	265	165	20
Increase/decrease in non-current receivables	1,970	935	14
Increase/decrease in dedicated third-party funds	–4,869	–2,212	22
Reclassification and other (non-cash) income	–	–	
Cash flows from operating activities	**803**	**8,967**	
Cash flows from investing activities			
Investments			
Purchase of property, plant and equipment	–1,995	–2,076	16
Increase in current and non-current financial assets	–	–	17
Total investments	*–1,995*	*–2,076*	
Divestments			
Disposal of property, plant and equipment	18	9	16
Total divestments	**18**	**9**	
Cash flows from investing activities	**–1,978**	**–2,067**	
Cash flows from financing activities			
Cash flows from financing activities	–	–	
Total cash flow	–1,175	6,901	
Cash and cash equivalents at the beginning of the period	63,681	56,780	13
Total cash flow	–1,175	6,901	
Cash and cash equivalents at the end of the period	62,506	63,681	13

Notes to the financial Statements

1 Business activity

Eawag is a global leader in aquatic research. The combination of natural, engineering and social sciences allows water to be investigated across the continuum from relatively pristine natural waters to fully engineered wastewater management systems. Eawag offers its professors, scientific staff and doctoral students a unique research environment, promoting active engagement with stakeholders from industry and society.

Eawag is an independent institute within the ETH Domain.

2 Basis of accounting

These financial statements cover the reporting period from 1 January 2019 to 31 December 2019. The reporting date is 31 December 2019. The reporting is prepared in Swiss francs (CHF). All figures are shown in thousands of Swiss francs (CHF 1,000) unless otherwise indicated.

Legal basis
The legal basis of Eawag's accounting is formed of the version of the following (including directives and regulations) in effect in the reporting period:

- Federal Act on the Federal Institutes of Technology of 4 October 1991 (ETH Act; SR 414.110)
- Ordinance on the Domain of the Swiss Federal Institutes of Technology of 19 November 2003 (Ordinance on the ETH Domain; SR 414.110.3)
- Ordinance on the Finance and Accounting of the ETH Domain of 5 December 2014 (SR 414.123)
- Accounting Manual for the ETH Domain (version 6.4)

Accounting standards
The financial statements of Eawag have been prepared in accordance with the International Public Sector Accounting Standards (IPSAS). The underlying accounting provisions are set out in the Accounting Manual for the ETH Domain (Art. 34 Directives, Ordinance on the Finance and Accounting of the ETH Domain, SR 414.123).

The following standards were newly adopted in the reporting period:

Standard	Title	Effective date
IPSAS 40	Public Sector Combinations	01.01.2019
Various	Improvements to IPSAS, 2018	01.01.2019

The standard IPSAS 40 is applied prospectively, whereby no combination took place in the reporting period. The amendments to IPSAS 2018 had no impact on the financial statement.

IPSAS issued but not yet applied
The following IPSAS were issued before the reporting date.

Standard	Title	Effective date
IPSAS 41	Financial Instruments (replaces IPSAS 29)	01.01.2022
IPSAS 42	Social Benefits	01.01.2022
Improvements to IPSAS 36 Investments in Associates and Joint Ventures and IPSAS 41 Financial Instruments		01.01.2022

The above-mentioned standards and improvements to the IPSAS have not been early applied in the present financial statements. Eawag will systematically analyse the impact on its financial statements. No material impact on the financial statements is currently expected. There are no further changes or interpretations which do not yet have to be applied and which would have a material impact on Eawag.

3 Accounting policies

The accounting policies are derived from the basis of accounting. The financial statements present a true and fair view of Eawag's financial position, financial performance and cash flows.

The financial statements are based on historical cost. Exceptions to this rule are described in the following presentation of the accounting principles.

The annual financial statements of Eawag are included in the consolidated financial statements of the ETH Domain.

Currency translation
Transactions in a currency other than the functional currency are translated using the exchange rate at the transaction date.

At the reporting date, monetary items in foreign currencies are translated at the closing rate and non-monetary items using the exchange rate at the transaction date. The resulting currency translation differences are recognised as finance income or finance expense.

The principal currencies and their exchange rates are:

		Closing rate as of		Average rate	
Currency	**Unit**	**31.12.2019**	**31.12.2018**	**2019**	**2018**
EUR	1	1.0866	1.1265	1.1125	1.1549
USD	1	0.9676	0.9855	0.9937	0.9780
GBP	1	1.2828	1.2523	1.2683	1.3055
JPY	1,000	8.9080	8.9600	9.1190	8.8500
SGD	1	0.7190	0.7205	0.7284	0.7250

Revenue recognition
Each inflow of funds is assessed to determine whether it is an exchange transaction (IPSAS 9) or a non-exchange transaction (IPSAS 23). In the case of an exchange transaction (IPSAS 9), the revenue is generally recognised when the goods are delivered or the services rendered. For project agreements, the performance obligation not yet satisfied is allocated to liabilities. The revenue is recorded and reported by reference to the stage of completion of the project, based on the costs incurred in the reporting period.

In the case of a non-exchange transaction (IPSAS 23), a distinction is made between whether or not there is a performance or repayment obligation. If there is such an obligation, the corresponding amount is recognised as a liability at inception of the agreement and released to the surplus or deficit according to the stage of completion, based on the resources consumed.

If there is neither an exchange nor a performance or repayment obligation in accordance with IPSAS 23, as is usually the case with donations, revenue is recognised in the surplus or deficit in full in the reporting period and the net assets/equity of Eawag increased accordingly.

Revenue is structured as follows:

- Total federal contribution
  The contributions granted by the Federal Government to the ETH Domain include the federal financial contribution (in the narrower sense) and the federal contribution to accommodation. Both types of revenue are classified as non-exchange transactions (IPSAS 23).
  Federal contributions are recognised in the year in which they are paid. Unused funds from federal financial contributions result in reserves under equity.

  The contribution to accommodation corresponds to the accommodation expense, which is equal to an imputed rent for the buildings owned by the Federal Government and used by Eawag. Accommodation expense is reported within other operating expenses.

- Continuing education
  Cost contributions to continuing education and further training as well as administration fees are classified as an exchange transaction (IPSAS 9). As a rule, revenue is accounted for on an accrual basis when the goods are delivered or the services rendered.

- Research contributions, mandates and scientific services
  Project-related contributions are given to Eawag by various donors with the aim of promoting teaching and research. Project financing primarily relates to multi-year projects. Depending on the nature of the contributions, they are classified as either an exchange or a non-exchange transaction.

- Donations and bequests
  Revenue from donations and bequests is classified as a non-exchange transaction (IPSAS 23). Such grants where there is no conditional repayment risk are usually recognised as revenue in full when the agreement is signed.

  Donations also include in-kind contributions, which are distinguished as follows:

  - Goods in-kind are recognised as assets in accordance with the applicable provisions when the agreement is signed.

  - Donated rights to use assets in the sense of an operating lease are recognised as revenue and expense. Donated rights to use assets in the sense of a finance lease are measured at their fair value at inception of the agreement, if this is known, and depreciated over their useful life. If a performance obligation exists, it is stated as a liability and revenue recognised annually according to the services received. If there is no performance obligation, revenue is recognised upon recognition of the asset as a whole.

  - Services in-kind received are not recognised but are instead disclosed and commented upon in the Notes if they are material.

  Due to the high number and the difficulty in elicitation, separability and measurement of rights of use and services in-kind within research agreements, these are not recognised. There is only a general description of the research activity in the Notes section.

– Other revenue
  Among other items, other revenue includes other service revenue and real estate revenue. This revenue is classified as an exchange transaction (IPSAS 9). As a rule, revenue is accounted for on an accrual basis when the goods are delivered or the services rendered.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, demand and term deposits with financial institutions and funds invested with the Federal Government if their total term or the remaining term to maturity on the date of acquisition is less than 90 days. Cash and cash equivalents are measured at their nominal amount.

Receivables

Receivables from exchange (from goods and services) and non-exchange transactions are presented separately in the balance sheet.

In the case of receivables from non-exchange transactions (IPSAS 23), such as for SNSF and EU projects and from other donors, it is probable that there will be an inflow of funds in relation to the total contractual project volume. Therefore, the total amount of the project is usually recognised as a receivable at the inception of the agreement if the fair value can be measured reliably. If the recognition criteria cannot be met, information is disclosed under contingent assets.

Non-current receivables of over CHF 10 m are stated at amortised cost using the effective interest method. Current receivables are stated at cost.

Value adjustments are recognised on receivables on the basis of experience and a case-by-case assessment.

Property, plant and equipment

Items of property, plant and equipment are stated at cost less accumulated depreciation. They are depreciated over their estimated useful life using the straight-line method. The estimated useful lives are as follows:

Asset category	Useful life Research Institutes
Immovable assets	
Property	unrestricted
Leasehold improvements ≤ CHF 1 million	10 years
Leasehold improvements > CHF 1 million	according to components [1]
Buildings and structures	according to components [2]
Biotopes and geotopes	unrestricted
Movable assets	
Machinery, equipment, tools, devices	5–10 years
Passenger vehicles, delivery vehicles, trucks, aircraft, ships, etc.	4–7 years
Furnishings	5–10 years
IT and communication	3–7 years
Large scale research plants and equipment	10–40 years [3]

1 In the case of items of property, plant and equipment with a value of CHF 1 million or above, it is checked whether components (with a value that is significant in relation to the total value) need to be recognised and depreciated separately because they have a different useful life (components approach).
2 Useful life depends on the type of building, its purpose and the fabric of the building (20–100 years). Assets under construction are not yet depreciated.
3 This practice is deviated from in exceptional cases

Capitalised leasehold improvements and installations in leased premises are depreciated over the estimated useful life or over the term of the lease if shorter.

In the event of additions to property, plant and equipment, it is checked whether components with a value that is significant in relation to the total value need to be recognised and depreciated separately because they have a different useful life (components approach).

Investments that have future economic benefits or are of public interest over several years and can be measured reliably are recognised as assets and depreciated over the estimated useful life.

The residual value of property, plant and equipment that is scrapped or sold is derecognised at the time of the asset's physical disposal. The gains or losses resulting from the derecognition of an item of property, plant and equipment are recognised as operating revenue or operating expenses.

Movable cultural items and works of art are not recognised as assets. An inventory of these items is kept.

Intangible assets
Intangible assets are recognised at cost. Standard software is amortised over three years using the straight-line method. Other intangible assets with an amortisation period required to be determined individually are amortised over their estimated useful life using the straight-line method.

Impairments (property, plant and equipment and intangible assets)
Property, plant and equipment and intangible assets are reviewed annually for indications of impairment. If specific indications are identified, an impairment test is performed. If the carrying amount permanently exceeds the value in use or net realisable value, then the difference is recognised as an impairment in the surplus or deficit.

Financial assets and loans
Financial assets are recognised at fair value if they are acquired with the intention of generating a profit from short-term fluctuations in price or if they are designated as financial assets at fair value (e.g. investments held without significant influence). Changes in value are recognised in the surplus or deficit.

Other non-current financial assets that are held for an indefinite period and may be sold at any time for liquidity reasons or in response to changes in market conditions are classified as available for sale and stated at fair value or at cost if the fair value cannot be determined reliably. Unrealised gains and losses are recognised in equity and only transferred to the surplus or deficit when the financial asset is sold or an impairment occurs.

Originated loans and fixed deposits are stated either at amortised cost (nominal value of less than CHF 10 m, and current loans and fixed deposits of over CHF 10 m) or at amortised cost using the effective interest method (non-current loans and fixed deposits of over CHF 10 m). The effective interest method allocates the difference between the acquisition cost and the repayment amount (premium/discount) over the term of the asset, using the net present value method. Impairment losses are recognised based on a case by case assessment.

Derivative financial instruments are used primarily for hedging or as a strategic position. Without exception, they are measured at fair value. Changes in value are usually recognised in the surplus or deficit.

Investment property
Eawag does not own any investment property.

Current liabilities
Current liabilities are usually recognised on receipt of the invoice. This item also includes current accounts with third parties (including social insurance institutions). Current liabilities are measured at their nominal amount.

Provisions
Provisions are recognised when a past event gives rise to a present obligation, an outflow of resources is likely and the amount can be estimated reliably.

Net defined benefit liabilities
Net defined benefit liabilities presented in the balance sheet are measured in accordance with IPSAS 39. They correspond to the present value of the defined benefit obligations (DBO), less the fair value of the plan assets.

A description of the pension scheme and the insured persons of the ETH Domain can be found in Note 21 "Net defined benefit liabilities". The defined benefit obligations and the service costs are determined annually by external experts using the projected unit credit actuarial valuation method. The calculation is made based on information about the beneficiaries (salary, vested benefits, etc.) and using both demographic (retirement rates, disability rates, mortality rates, etc.) and financial (salary or pension trends, returns, etc.) assumptions. The amounts calculated are discounted to the valuation date by applying a discount rate. Changes in estimates of economic conditions can significantly affect defined benefit obligations.
The defined benefit obligations were measured based on the current membership base of the ETH Domain's pension scheme as of 31 October 2019, using actuarial assumptions as of 31 December 2019 (e. g. BVG 2015 actuarial tables), and the plan provisions of the ETH Domain pension scheme. The results were then adjusted using estimated pro rata cash flows as of 31 December 2019. The fair value of the plan assets is used including estimated performance as of 31 December 2019.

Current service cost, past service cost resulting from plan amendments, gains and losses on settlement, administrative costs and interest on the net defined benefit liabilities are presented in the statement of financial performance within personnel expenses.

Plan amendments and settlements are recognised immediately in the surplus or deficit in the period in which they occur, provided they result in vested benefits. Actuarial and investment gains and losses on defined benefit plans are recognised directly in equity in the reporting period in which they occur.

Dedicated third-party funds
Liabilities from projects that arise from non-exchange transactions (IPSAS 23) are presented in the balance sheet as dedicated third-party funds. They are allocated solely to non-current liabilities because the projects usually last for several years and the current portion of the liability cannot be determined in most cases due to the nature of the projects.

They are measured based on the outstanding performance obligations at the reporting date, which are calculated from the total contractual project volume less services performed up to the reporting date.

Equity
Net assets/equity is the residual interest in the assets of an entity after deducting all its liabilities. Equity is structured as follows:

- Valuation reserves
  Recognition in equity:

  - Revaluation reserves for available-for-sale financial assets recognised at fair value. Fair value changes are recognised in equity until the financial assets are sold.

  - Revaluation reserves for net defined benefit liabilities. Actuarial and investment gains and losses on defined benefit obligations or plan assets are recognised in equity.

  - Valuation reserves for hedging transactions. If hedge accounting is used, positive and negative replacement values from hedging transactions are recognised in equity and released to the surplus or deficit once the underlying hedged transaction affects the surplus or deficit.

- Dedicated reserves

  - Teaching and research reserves
    This item indicates that various internal and external commitments exist and appropriate reserves have to be recognised to cover them.

  - Infrastructure and administration reserves
    These include reserves for delayed construction projects.

  Dedicated reserves must have been generated. They are recognised and released within the equity.

- Free reserves
  Unused funds for which there are no contractual or internal provisions in accordance with IPSAS are presented as free reserves. They are not restricted in terms of time or purpose.

- Accumulated surplus/deficit
  The accumulated surplus or deficit shows the cumulative results at the reporting date. It comprises the surplus/deficit carried forward, the surplus/deficit for the period and increases or decreases in reserves.

  The surplus/deficit carried forward is accumulated annually as part of the appropriation of surplus/deficit. The surplus/deficit for the period includes the portion of the result not yet distributed.

Contingent liabilities and contingent assets
A contingent liability is either a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of an uncertain future event not wholly within the control of the entity, or a present obligation that arises from past events but is not recognised because of its low probability of occurrence (less than 50%) or because the obligation cannot be measured reliably, as a result of which the criteria for recognising a provision are not met.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non occurrence of an uncertain future event not wholly within the control of the entity.

Financial commitments
Financial commitments are presented in the Notes if they are based on events prior to the reporting date, they will definitely lead to obligations to third parties after the reporting date and their amount can be measured reliably.

Cash flow statement
The cash flow statement shows the cash flows from operating activities, investing activities and financing activities. It is presented using the indirect method, i.e. cash flows from operating activities are based on the surplus or deficit for the period, adjusted for the effects of transactions of a non-cash nature. "Total cash flow" represents the change in the balance sheet item "Cash and cash equivalents".

4 Estimation uncertainty and management judgements

Estimation uncertainty in the application of accounting policies
Preparation of the annual financial statements is dependent on assumptions and estimates in connection with accounting principles, where management has a certain margin of discretion. Although these estimates are based on management's best knowledge, the actual results may differ.

This applies to the following items in particular:

- Useful life and impairment of plant, property and equipment
  The useful life of plant, property and equipment is defined and periodically reviewed bearing in mind the current technical environment and past experience. A change in the estimate may affect the future amount of the depreciation charges and the carrying amount.

- Estimates that could lead to a reduction in the carrying amount (impairment) are likewise made in the course of the regular impairment test.

– Provisions
These involve a higher degree of estimation than other balance sheet items and therefore may lead to a higher or lower cash outflow depending on the actual outcome of a past event.

– Net defined benefit liabilities
The net defined benefit liabilities are calculated based on long-term actuarial assumptions for the defined benefit obligations and for the expected returns on plan assets. These assumptions may differ from actual future developments. The discount rate and future salary trends are key components in the actuarial valuation.

– Discount rates
Uniform discount rates have been defined for use in discounting non-current receivables, liabilities and provisions. They are based on a risk-free rate and a premium for credit risk. However, because of the current interest rate situation these discount rates are subject to some uncertainties.

Management judgements in the application of accounting policies
Neither in the reporting year nor in the previous year were there any management judgments in this regard having a material effect on the annual financial statements.

5 Total federal contribution

Federal financial contribution

CHF 1,000	**2019**	**2018**
Basic federal financial contribution	47,783	58,373
Performance-based allocation of funds	–	1,450
Strategic programs according to ERI	245	53
Credit reallocation from federal investment credit	2,370	–475
Credit reallocation within ETH Domain	–487	–395
Federal financial contribution	**49,912**	**59,007**

The federal financial contribution was used to achieve the goals specified in the performance mandate 2017–2020. The decrease in the basic contribution compared to the previous year is essentially due to the shifting of CHF 11 m between the two credits within the total federal contribution (lower federal financial contribution and correspondingly higher investment credit for constructions of the ETH Domain).

Federal contribution to accommodation

CHF 1,000	**2019**	**2018**
Federal contribution to accommodation	**3,625**	**4,485**

The federal contribution to accommodation is used to cover rental expenses for federally owned properties.

The total rental amount in the ETH Domain is allocated to the individual institutions according to a formula. The adjustment of this formula in 2019, together with the general reduction in the total amount compared to the previous year, resulted in a lower amount in 2019.

6 Continuing education

CHF 1,000	2019	2018
Continuing education	**129**	**96**

Continuing education mainly comprises income from Peak and other courses, and from the Info Day.

7 Research contributions, mandates and scientific services

CHF 1,000	2019	of which revenues (IPSAS 23)	of which revenues (IPSAS 9)	2018	of which revenues (IPSAS 23)	of which revenues (IPSAS 9)
Swiss National Science Foundation (SNSF)	5,441	5,441	–	5,858	5,841	17
Swiss Innovation Agency (Innosuisse)	281	281	–	311	311	–
Special federal funding of applied research	4,741	1,154	3,587	5,091	1,680	3,412
EU Framework Programmes for Research and Innovation (FP)	1,477	1,477	–	1,917	1,917	–
Industry-oriented research (private sector)	837	–	837	763	–	763
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)	3,481	1,062	2,419	3,308	1,849	1,459
Total research contributions, mandates and scientific services	**16,259**	**9,415**	**6,843**	**17,249**	**11,599**	**5,650**

Teaching and research projects are generally multi-year activities (approx. 3–5 years).

Overall, revenues are 6 % below the previous year's, depending on the stage of project completion. In the reporting year, the EU Framework Programmes for Research and Innovation include CHF 556,000 (previous year: CHF 711,000) of direct federal (SERI) funding for Horizon 2020 bridging measures.

8 Other revenue

CHF 1,000	2019	2018
Sales	8	7
Other services	–	–
Real estate revenue	273	266
Profit from disposals (property, plant and equipment)	2	5
Own work capitalised	–	–
Other miscellaneous revenue	439	457
Total other revenue	**722**	**735**

Real estate revenue includes, in particular, income from rental of guest house apartments. The other miscellaneous revenue is attributable to various relatively small amounts.

9 Personnel expenses

CHF 1,000	2019	2018
Professors	–	–
Scientific personnel	28,478	27,153
Technical and administrative personnel, apprentices, trainees	16,021	15,640
IC, Suva and other refunds	–344	–275
Total salaries and wages	**44,155**	**42,518**
Social insurances OASI/DI/IC/MB	2,619	2,520
Net pension costs	6,897	7,225
Accident and sickness insurance Suva (BU/NBU/KTG)	156	159
Employer's contribution to Family Compensation Fund (FAK/FamZG)	512	489
Total social insurance schemes and pension expenses	**10,184**	**10,394**
Other employer contributions	–139	–217
Temporary personnel	25	–
Change in provisions for untaken leave and overtime	126	85
Change in provisions for contributions to long-service awards	145	103
Other personnel expenses	673	779
Total personnel expenses	**55,169**	**53,660**

The increase in personnel expenses is in line with expectations and reflects a slight rise in the headcount. Other effects are a result of the salary measures for 2019 for employees.

10 Other operating expenses

CHF 1,000	2019	2018
Expenses for goods and materials	2,711	2,728
Premises costs	5,771	6,392
Other operating costs	10,857	10,737
Total other operating expenses	**19,339**	**19,857**

The decrease in premises costs is attributable to the decrease in rents for federally owned properties (cf. Note 5 Federal contribution to accommodation). In other respects, the other operating expenses are in line with expectations and with the previous year.

11 Transfer expenses

CHF 1,000	2019	2018
Scholarships and grants to students and doctoral students	–	–
Contributions to research projects	144	327
Expenses for the participation in projects of national significance	–	–
Special initiatives	–	–
Other	144	327
Other transfer expenses	–	18
Total transfer expenses	**144**	**345**

Eawag provides financial support for various research projects run by other public institutions (universities, higher education establishments, etc.).

12 Net finance income/expense

CHF 1,000	2019	2018
Finance income		
Interest income	–	–
Foreign currency gains	64	16
Other finance income	–	–
Total finance income	**64**	**16**
Finance expense		
Interest expense	–	–
Foreign currency losses	67	69
Other finance expense	4	5
Total finance expense	**72**	**73**
Total net finance income/expense	**–8**	**–57**

13 Cash and cash equivalents

CHF 1,000	31.12.2019	31.12.2018
Cash	41	39
Swiss Post	6,620	3,937
Bank	1,146	1,004
Short-term deposits (<90 days)	54,700	58,700
Total cash and cash equivalents	**62,506**	**63,681**

Short-term deposits are wholly invested in federal financial instruments. In the reporting year, CHF 4 m was withdrawn in order to ensure short-term liquidity.

Cash and cash equivalents are not subject to any disposal restrictions.

14 Receivables

CHF 1,000	**31.12.2019**	**31.12.2018**
Receivables from non-exchange transactions		
Receivables from project contracts and donations	11,690	16,456
Other receivables	442	401
Value adjustments	–	–
Total receivables from non-exchange transactions	**12,132**	**16,857**
of which current	7,773	10,528
of which non-current	4,360	6,329
Receivables from exchange transactions		
Trade accounts receivable	760	612
Other receivables	101	75
Value adjustments	–	–
Total receivables from exchange transactions	**861**	**687**
of which current	861	687
of which non-current	–	–

Since the receivables do not include any at-risk items, no value adjustments have been made.

In both the reporting and the previous year, no losses on receivables were recorded.

There are no receivables due for more than 90 days.

15 Prepaid expenses and accrued income

CHF 1,000	**31.12.2019**	**31.12.2018**
Interest	–	–
Prepaid expenses	1,339	2,638
Other prepaid expenses and accrued income	672	730
Total prepaid expenses and accrued income	**2,011**	**3,368**

Prepaid expenses essentially comprise the fees payable in advance for the library databases. In the reporting year, prepayments for the following year were lower than in the previous year; for this reason, the prepaid expenses are also lower.

Other prepaid expenses and accrued income derive from current IPSAS 9 (exchange transaction) projects.

16 Property, plant and equipment and intangible assets

CHF 1,000	Large scale research plants and equipment, machinery, furnishings, vehicles	Information and communication	Advance payments, movable assets under construction	**Total movable assets**	Leasehold improvements	Assets under construction	**Total immovable assets**	**Total property, plant and equipment**	**Total intangible assets**
Purchase value									
Value as of 01.01.2019	**32,108**	**1,264**	**1,010**	**34,381**	**20,879**	**–**	**20,879**	**55,259**	**109**
Additions	1,412	21	562	1,995	–	–	–	1,995	–
Reclassifications	1,178	29	–1,207	–	–	–	–	–	–
Disposals	–1,289	–323	–	–1,612	–	–	–	–1,612	–
Value as of 31.12.2019	**33,408**	**991**	**365**	**34,764**	**20,879**	**–**	**20,879**	**55,642**	**109**
Accumulated depreciation									
Value as of 01.01.2019	**22,584**	**1,185**	**–**	**23,768**	**9,288**	**–**	**9,288**	**33,057**	**109**
Depreciation	1,965	36	–	2,002	1,685	–	1,685	3,686	–
Impairments	–	–	–	–	–	–	–	–	–
Reversed impairments	–	–	–	–	–	–	–	–	–
Reclassifications	–	–	–	–	–	–	–	–	–
Disposals value adjustments	–1,272	–323	–	–1,595	–	–	–	–1,595	–
Value as of 31.12.2019	**23,277**	**898**	**–**	**24,175**	**10,973**	**–**	**10,973**	**35,149**	**109**
Balance sheet value as of 31.12.2019	**10,131**	**93**	**365**	**10,588**	**9,906**	**–**	**9,906**	**20,494**	**–**
thereof leased assets				–			–	–	–

CHF 1,000	Large scale research plants and equipment, machinery, furnishings, vehicles	Information and communication	Advance payments, movable assets under construction	**Total movable assets**	Leasehold improvements	Assets under construction	**Total immovable assets**	**Total property, plant and equipment**	**Total intangible assets**
Purchase value									
Value as of 01.01.2018	**31,800**	**1,226**	**26**	**33,051**	**20,848**	**–**	**20,848**	**53,899**	**109**
Additions	998	38	1,010	2,045	31	–	31	2,076	–
Reclassifications	26	–	−26	–	–	–	–	–	–
Disposals	−716	–	–	−716	–	–	–	−716	–
Value as of 31.12.2018	**32,108**	**1,264**	**1,010**	**34,381**	**20,879**	**–**	**20,879**	**55,259**	**109**
Accumulated depreciation									
Value as of 01.01.2018	**21,366**	**1,152**	**–**	**22,519**	**7,590**	**–**	**7,590**	**30,109**	**109**
Depreciation	1,924	32	–	1,956	1,698	–	1,698	3,654	–
Impairments	–	–	–	–	–	–	–	–	–
Reversed impairments	–	–	–	–	–	–	–	–	–
Reclassifications	–	–	–	–	–	–	–	–	–
Disposals value adjustments	−707	–	–	−707	–	–	–	−707	–
Value as of 31.12.2018	**22,584**	**1,185**	**–**	**23,768**	**9,288**	**–**	**9,288**	**33,057**	**109**
Balance sheet value as of 31.12.2018	**9,524**	**79**	**1,010**	**10,612**	**11,590**	**–**	**11,590**	**22,203**	**–**
thereof leased assets				–			–	–	–

Eawag does not have any leased property, plant and equipment or leased intangible assets. There are no disposal restrictions or pledged tangible or intangible assets.

The leasehold improvements are located in or on federally owned buildings and property.

The advance payments mainly relate to scientific equipment which was delivered towards the end of the reporting year and was not yet in operation on the reporting date.

17 Financial assets and loans

CHF 1,000	31.12.2019	31.12.2018
Current financial assets and loans		
Other financial assets	25,228	25,228
Loans	–	–
Total current financial assets and loans	**25,228**	**25,228**

Current financial assets consist exclusively of financial assets placed in accordance with the agreement between the Federal Finance Administration and the ETH Board concerning Treasury relations between the Federal Finance Administration and the ETH Board (19 November 2007). The assets in question are third-party funds already received and temporarily deposited with the Federal Treasury before being used in teaching and research.

18 Current liabilities

CHF 1,000	31.12.2019	31.12.2018
Trade payables	2,843	1,415
Liabilities to social insurance institutions	977	711
Other current liabilities	710	450
Total current liabilities	**4,531**	**2,577**

Trade payables increased since, in December, a number of substantial invoices were received which were not settled until the following year.

19 Accrued expenses and deferred income

CHF 1,000	31.12.2019	31.12.2018
Interest	–	–
Deferred income	1,309	1,616
Other accrued expenses and deferred income	218	113
Total accrued expenses and deferred income	**1,527**	**1,729**

Deferred income comprises income from IPSAS 9 (exchange transaction) projects which is only to be recognised as revenue in the new accounting period.

20 Provisions

CHF 1,000	31.12.2019	31.12.2018
Provisions for untaken leave and overtime	2,838	2,713
Other long-term employee benefits (IPSAS 39)	2,030	1,885
Other provisions	12	18
Total provisions	**4,880**	**4,615**

CHF 1,000	Provisions for untaken leave and overtime	Other long-term employee benefits (IPSAS 39)	Other provisions	**Total provisions**
Value as of 01.01.2019	**2,713**	**1,885**	**18**	**4,615**
Creation (incl. increase)	126	389	12	527
Reversal	–	–	–14	–14
Appropriation	–	–244	–3	–247
Reclassifications	–	–	–	–
Increase in present value	–	–	–	–
Value as of 31.12.2019	**2,838**	**2,030**	**12**	**4,880**
of which current	2,838	–	12	2,850
of which non-current	–	2,030	–	2,030

CHF 1,000	Provisions for untaken leave and overtime	Other long-term employee benefits (IPSAS 39)	Other provisions	**Total provisions**
Value as of 01.01.2018	**2,628**	**1,782**	**40**	**4,450**
Creation (incl. increase)	85	402	18	504
Reversal	–	–	–	–
Appropriation	–	–299	–40	–339
Reclassifications	–	–	–	–
Increase in present value	–	–	–	–
Value as of 31.12.2018	**2,713**	**1,885**	**18**	**4,615**
of which current	2,713	–	18	2,730
of which non-current	–	1,885	–	1,885

Other long-term employee benefits (IPSAS 39) are future long-service awards. These are calculated pro rata, taking account of staff turnover.

21 Net defined benefit liabilities

All employees and pensioners of Eawag are insured under the pension scheme maintained by the ETH Domain at the collective institution "Swiss Federal Pension Fund PUBLICA" (PUBLICA).

Legal framework and responsibilities
Legal requirements
Swiss pension plans must be run through a legally separate, trustee-administered pension institution. The law prescribes minimum benefits.

Organisation of the pension scheme
PUBLICA is an independent, state-run institution under public law.

The Board of Directors (Kassenkommission) is PUBLICA's most senior governing body. In addition to management, it is also responsible for the oversight and supervision of PUBLICA's Executive Board. The Board of Directors has 16 members, eight representing the insured members and eight representing the employers from among all the affiliated pension plans. This means that PUBLICA's most senior governing body is made up of an equal number of employee and employer representatives.

Each pension scheme has its own governing body made up of equal numbers of representatives. Among other things, it is involved in concluding the affiliation contract and decides on the appropriation of any surpluses. Each governing body is made up of nine employer representatives and nine employee representatives from the entities.

Insurance plan
In accordance with IPSAS 39, insurance plans are classified as defined benefit plans.

The pension plan is defined in the Terms of the ETH Domain pension scheme applicable to employees and professors, which form part of the affiliation contract with PUBLICA. The pension plan provides benefits in excess of the minimum benefits required by law in the event of disability, death, old age and departure; i.e. it is what is known as an "enveloping" plan (obligatory and extraordinary benefits).

The employer and employee savings contributions are set as a percentage of the insured salary. A risk premium is charged for death and disability insurance. The administrative costs are paid by the employer.

The old-age pension is calculated from the credit balance in the retirement fund at the retirement date multiplied by the conversion rate specified in the Terms. Employees have the option of drawing the retirement benefits as a lump sum. There are pension plans for different groups of insured persons. In addition, employees have the option of making additional savings contributions.

The risk benefits are determined depending on the projected savings capital, which attracts interest, and on the conversion rate.

Investment of assets
Investments are made by PUBLICA for all pension schemes (with the same investment profile) collectively.

As PUBLICA's most senior governing body, the Board of Directors bears overall responsibility for asset management. It is responsible for issuing and amending the investment policy and determines the investment strategy. The Investment Committee advises the Board of Directors on investment-related issues and oversees compliance with the investment policy and strategy.

Responsibility for implementing the investment strategy rests with PUBLICA's Asset Management. Asset Management also makes tactical decisions to deviate temporarily from the investment strategy weightings in order to generate added value compared to the existing strategy. Where individual asset classes are built up or reduced over a number of years, a pro rata strategy is calculated so as to enable transactions to be diversified over time.

Risks for the employer
The governing body of the ETH Domain's pension scheme made up of equal numbers of representatives can change the funding system (contributions and future benefits) at any time. The governing body may collect restructuring contributions from the employer while the scheme is underfunded within the meaning of pension law (Article 44 Occupational Pension Ordinance (BVV 2)) and if other measures are without success. If these are used to fund benefits in excess of the statutory minimum, the employer must give its consent.

The definitive funding ratio in accordance with the Occupational Pensions Act (BVG) was not yet available at the time the annual financial statements were authorised for issue. The provisional regulatory funding ratio for the ETH Domain's pension scheme at PUBLICA, in accordance with the Occupational Pension Ordinance (BVV 2), was 105.7% at the end of 2019 (2018: 101.8%, definitive). The provisional economic funding ratio for the ETH Domain's pension scheme at PUBLICA was 87.2% at the end of 2019 (2018: 84.7%, definitive).

Special events

There were no plan amendments, curtailments or settlements to be considered in the current reporting period.

Net defined benefit liabilities

CHF 1,000	**31.12.2019**	**31.12.2018**
Present value of defined benefit obligations	–227,980	–207,440
Fair value of plan assets	172,015	155,777
Recognised net defined benefit liabilities	**–55,965**	**–51,663**

The increase of CHF 4.3 m in net defined benefit liabilities is mainly attributable to the reduction of the discount rate (2019: -0.2% / 2018: 0.3%), which was largely offset by the positive return on plan assets.

Net pension costs

CHF 1,000	**2019**	**2018**
Current service cost (employer)	6,709	7,011
Past service cost	–	168
Interest expense from defined benefit obligations	627	629
Interest income from plan assets	–469	–492
Administrative costs (excl. asset management costs)	112	108
Total Net pension costs incl. interest expense recognised in statement of financial performance	**6,979**	**7,424**

Net pension costs are CHF 445,000 lower than in the previous year. The decrease of CHF 302,000 in the current service cost is due to the adjustment of actuarial assumptions in the previous year (2018 vs 2017). The past service cost in the previous year included the effects of the adjustment of the technical interest rate and of the conversion rate at PUBLICA. The interest expense from defined benefit obligations remained stable, and interest income from plan assets decreased by CHF 23,000. These minimal changes are attributable to the unchanged discount rate effective from 1 January (2019: 0.3% vs 2018: 0.3%).

Deposits amounting to CHF 3.5 m were transferred by the ETH Board to the ETH Domain's pension plan in the year under review. This sum was recognised pro rata for Eawag (CHF 82,000) as an employer contribution in the actuarial report and leads to a difference from the net pension costs actually entered since an internal transfer cannot be recorded.

Employer's contributions of CHF 5.1 m and employees' contributions of CHF 2.9 m are expected for the coming financial year.

Revaluation recognised in equity

CHF 1,000	31.12.2019	31.12.2018
Actuarial gains (–) and losses (+)		
from change in financial assumptions	15,391	–892
from change in demographic assumptions	–	–872
from experience adjustments	1,673	–1,753
Return on plan assets excl. interest income (gains (–)/losses (+))	–14,522	8,148
Revaluation amount recognised in equity	**2,542**	**4,631**
Cumulative amount of revaluation recognised in equity (gain (–)/loss (+))	**33,127**	**30,585**

The revaluation loss recognised in equity in 2019 amounted to CHF 2.5 m (2018: CHF 4.6 m). This results in a cumulative accrued loss of CHF 33.1 m as of 31 December 2019 (2018: CHF 30.6 m). The actuarial losses from changes in financial assumptions result from the reduction of the discount rate and were slightly mitigated by the reduction in interest on retirement savings. The return on plan assets recognised in equity is attributable to the higher positive return generated (over 9%) compared to the expected return (corresponding to the discount rate of 0.3%).

Change in present value of defined benefit obligations during year

CHF 1,000	2019	2018
Present value of defined benefit obligations as of 01.01.	**207,440**	**209,082**
Current service cost (employer)	6,709	7,011
Interest expense from defined benefit obligations	627	629
Employee contributions	3,000	2,744
Benefits paid in (+) and paid out (–)	–6,860	–8,677
Past service cost	–	168
Actuarial gains (–) / losses (+)	17,064	–3,517
Present value of defined benefit obligations as of 31.12.	**227,980**	**207,440**

The weighted average term arising from defined benefit obligations is 15.7 years as of 31 December 2019 (2018: 15.0 years).

Change in fair value of plan assets during year

CHF 1,000	2019	2018
Fair value of plan assets as of 01.01.	**155,777**	**164,398**
Interest income from plan assets	469	492
Employer contributions	5,219	5,076
Employee contributions	3,000	2,744
Benefits paid in (+) and paid out (–)	–6,860	–8,677
Administrative costs (excl. asset management costs)	–112	–108
Return on plan assets excl. interest income (gains (+) / losses (–))	14,522	–8,148
Fair value of plan assets as of 31.12.	**172,015**	**155,777**

Transition of net defined benefit liabilities

CHF 1,000	2019	2018
Net defined benefit liabilities as of 01.01.	**–51,663**	**–44,684**
Net pension costs incl. interest expense recognised in statement of financial performance	–6,979	–7,424
Revaluation amount recognised in equity	–2,542	–4,631
Employer contributions	5,219	5,076
Obligations paid directly by the entity	–	–
Net defined benefit liabilities as of 31.12.	**–55,965**	**–51,663**

Major categories of plan assets

PERCENTAGE	Listed	Not listed	31.12.2019	Listed	Not listed	31.12.2018
Liquidity	5	–	6	3	–	2
Bonds (in CHF) Confederation	6	–	5	7	–	6
Bonds (in CHF) ex. Confederation	12	–	10	13	–	12
Government bonds (in foreign currencies)	29	–	26	28	–	26
Corporate bonds (in foreign currencies)	12	–	11	15	–	14
Mortgages	–	–	–	–	–	–
Shares	30	–	27	31	–	28
Real estate	3	53	8	1	65	7
Commodities	3	–	2	2	–	2
Other	–	47	5	–	35	3
Total plan assets	**100**	**100**	**100**	**100**	**100**	**100**

PUBLICA bears the actuarial and investment risks itself. The investment strategy is defined in such a way that benefits under the policy can be provided at maturity.

There is no known pension plan real estate used by the employer.

Principal actuarial assumptions used as at the reporting date

PERCENTAGE	2019	2018
Discount rate as of 01.01.	0.30	0.30
Discount rate as of 31.12.	–0.20	0.30
Expected salary development	0.50	0.50
Expected pension development	0.00	0.00
Interest on retirement savings	0.00	0.30
Life expectancy at age 65 – women (no. of years)	24.65	24.54
Life expectancy at age 65 – men (no. of years)	22.61	22.50

The discount rate is based on the spot interest rates for Confederation bonds published by the Swiss National Bank on a monthly basis and the expected cash flows of the ETH Domain's pension scheme at PUBLICA in accordance with existing prior-year data. The expected future salary development is based on reference economic variables. The expected pension development is the rate of pension increase expected for the average remaining term based on the financial position of the pension plan. The generation tables in BVG 2015 are applied for assumptions about life expectancy.

Sensitivity analysis (change in present value of defined benefit obligations)

	31.12.2019		31.12.2018	
CHF 1,000	Increase in assumption	Decrease in assumption	Increase in assumption	Decrease in assumption
Discount rate (change +/– 0.25%)	–8,666	9,288	–7,487	8,007
Expected salary development (change +/– 0.25%)	924	–903	776	–774
Expected pension development (change +/– 0.25%)	7,228	n/a	6,243	n/a
Interest on retirement savings (change +/– 0.25%)	1,381	n/a	1,223	–1,211
Life expectancy (change +/– 1 year)	7,833	–7,891	6,734	–6,812

The change in defined benefit obligations upon adjustment of the actuarial assumptions is determined in the sensitivity analysis. Only one of the assumptions is adjusted at a time, while the other parameters remain unchanged. The assumptions concerning pension development and interest on retirement savings have been increased for the reporting year and not lowered, since a reduction in pension benefits or in interest on retirement savings is not possible. The sensitivity to life expectancy has been calculated by lowering or increasing life expectancy by a flat-rate factor, as a result of which life expectancy for most age categories has been increased or reduced by about one year.

22 Dedicated third-party funds

CHF 1,000	**31.12.2019**	**31.12.2018**
Swiss National Science Foundation (SNSF)	12,021	12,322
Swiss Innovation Agency (Innosuisse)	217	498
EU Framework Programmes for Research and Innovation (FP)	953	2,752
Special federal funding of applied research	1,502	3,703
Industry-oriented research (private sector)	–	–
Other project-oriented third-party funding	1,563	1,851
Donations and bequests	–	–
Total dedicated third-party funds	**16,257**	**21,126**

The decrease in EU Framework Programmes for Research and Innovation is due to the fact that no new Horizon 2020 projects were acquired.

In the case of special federal funding of applied research, the higher proportion of funding classified as an exchange transaction (IPSAS 9) led to a decrease in dedicated third-party funds.

23 Financial risk management and additional information about financial instruments

General
Financial risk management is embedded in the general risk management of Eawag, in respect of which annual reports are made to the ETH Board (see Annual Report, chapter on Risk Situation and Risk Management, pp. 50/51).

Financial risk management primarily addresses:
- credit risk (default risk),
- liquidity risk, and
- market risk (interest rate, foreign currency and other price risk).

The focus of risk management remains on credit risk. There are guidelines governing the investment of financial resources in order to reduce credit and market risk. The counterparties to a large proportion of the receivables and claims arising from financial assets are of high credit standing and solvency. Risk concentrations only exist in respect of those counterparties, which is why credit risk is regarded as low. Furthermore, there are receivables and financial assets in foreign currencies which are hedged according to prevailing circumstances in order to minimise the risk.
Compliance with and the effectiveness of the guidelines are ensured by the internal control system (ICS).

Maximum exposure to credit risk, composition of counterparties

CHF 1,000	Total	Federal Government	European Commission FP *	SNSF, Innosuisse, OASI social service, Suva	SNB and banks with government guarantee	Postfinance and other banks	Other counterparties
31.12.2019							
Cash and cash equivalents	62,506	54,741	–	–	1,146	6,620	–
Receivables from non-exchange transactions	12,132	898	632	9,062	–	–	1,540
Receivables from exchange transactions	861	366	–	–	–	–	495
Financial assets and loans	25,228	25,228	–	–	–	–	–
Prepaid expenses and accrued income	672	326	–	–	–	–	346
Total	**101,399**	**81,559**	**632**	**9,062**	**1,146**	**6,620**	**2,380**
31.12.2018							
Total previous period	**107,183**	**87,793**	**2,419**	**8,708**	**1,004**	**3,937**	**3,321**

* The remaining receivables due from the Federal Government (State Secretariat for Education, Research and Innovation SERI) under the bridging programme for Horizon 2020 and the receivables from European universities arising from EU research framework programmes are shown in the column headed European Commission.

The maximum exposure to credit risk corresponds to the carrying amounts in the balance sheet. The actual risk is very low due to the fact that the counterparties to a large proportion of the financial assets are the Federal Government and other public-sector institutions.

Liquidity risk

Eawag has processes and principles in place which guarantee that adequate liquidity is available to settle current and future obligations. This includes maintaining an adequate reserve of liquidity and tradeable securities.

Contractual maturities of financial liabilities

CHF 1,000	Total carrying amount	Total contract value	Up to 1 year	1–5 years
31.12.2019				
Non-derivative financial liabilities				
Current liabilities	4,531	4,531	4,531	–
Leasing liabilities	–	–	–	–
Financial liabilities	–	–	–	–
Accrued expenses and deferred income	218	218	218	–
Derivative financial liabilities	**–**	**–**	**–**	**–**
Total	**4,749**	**4,749**	**4,749**	**–**
31.12.2018				
Total previous period	**2,690**	**2,690**	**2,690**	**–**

Financial liabilities arise, most notably, from current operating liabilities. Under normal circumstances, expenses and investments are financed with self-generated funds.

All financial liabilities are covered by liquidity and by short-term deposits with the Federal Government. Liquidity risk is low.

Market risk

Interest rate and price risk

Interest rate risk is not hedged. A one percentage point increase or decrease in the interest rate would increase or reduce surplus or deficit by around CHF 330,000 (previous year: CHF 302,000).

Foreign currency risk

Most foreign currency receivables are in euros and US dollars; they are hedged using derivative financial instruments according to prevailing circumstances. Net of hedges, a fluctuation in the exchange rate of these two currencies of +/–10% would impact on the statement of financial performance as follows:

Sensitivity, foreign currency risk

	31.12.2019					**31.12.2018**				
CHF 1,000	**Total**	**CHF**	**EUR**	**USD**	**Other**	**Total**	**CHF**	**EUR**	**USD**	**Other**
Net currency balance	**85,056**	**83,942**	**1,234**	**9**	**–129**	**89,814**	**87,551**	**359**	**1,924**	**–19**
Sensitivity affecting financial performance +/– 10%			123	1				36	192	
Closing rate			1.0866	0.9676				1.1265	0.9855	

Net surplus or deficit by valuation category

CHF 1,000	**Loans and receivables**	**At fair value through surplus or deficit**	**Available for sale**	**Financial liabilities**
31.12.2019				
Interest income (+) / interest expense (–)	–	–		–
Currency translation differences, net	–4	–		–
Impairments	–		–	
Reversal of impairment	–			
Net surplus or deficit recorded in the statement of financial performance	**–4**	**–**	**–**	**–**
Net surplus or deficit recognised in equity	**–**	**–**	**–**	**–**
Total net surplus or deficit by category	**–4**	**–**	**–**	**–**
Total net surplus or deficit by category previous year	**–53**	**–**	**–**	**–**

Classes and categories of financial instruments

CHF 1,000	Loans and receivables	At fair value through surplus or deficit	Available for sale	Financial liabilities measured at amortised cost	Total carrying amount	Total fair value
31.12.2019						
Cash and cash equivalents	62,506				62,506	62,506
Receivables from non-exchange transactions	12,132				12,132	12,132
Receivables from exchange transactions	861				861	861
Financial assets and loans	25,228	–	–		25,228	25,228
Prepaid expenses and accrued income	672				672	672
Financial liabilities *	–	–	–	4,749	4,749	4,749
31.12.2018						
Financial assets **	107,183	–	–	–	107,183	107,183
Financial liabilities *	–	–	–	2,690	2,690	2,690

* Current liabilities, Finance lease liabilities, Other financial liabilities, Accrued expenses and deferred income
** Cash and cash equivalents, Receivables from non-exchange transactions, Receivables from exchange transactions, Financial assets and loans, Prepaid expenses and accrued income

Eawag does not hold any held-to-maturity financial assets.

Estimation of fair value
Because of their short-term maturity, the carrying amount of cash and cash equivalents and the carrying amounts of current loans, fixed deposits, receivables and current liabilities are a reasonable approximation of fair value.

The fair value of non-current receivables from non-exchange transactions and non-current loans is calculated based on the payments falling due in the future, which are discounted at market interest rates.

Capital management
Managed capital is defined as equity excluding valuation reserves. Eawag seeks to create a solid equity base. This base will enable the implementation of the performance mandate to be guaranteed. Legal regulations prohibit Eawag from raising funds in the capital market.

24 Contingent liabilities and contingent assets

Contingent liabilities
There are no contingent liabilities.

Contingent assets
There are no contingent assets.

25 Financial commitments

CHF 1,000	**31.12.2019**	**31.12.2018**
Financial commitments ≤ 1 year	611	664
Financial commitments from 1 to 5 years	249	–
Total financial commitments	**860**	**664**

The financial commitments relate to equipment, software or services that have been firmly ordered but not yet supplied.

In addition, Empa and Eawag operate a communal guest house, with Empa acting as the primary tenant. This is recorded in Empa's accounts.

Each year, any expenses not covered by guest house rental income are settled internally between Eawag and Empa.

26 Operating leases

There are no fixed-term lease agreements.

27 Remuneration of key management personnel

Remuneration of key management personnel

CHF 1,000	**2019**	**2018**
Directorate	**1,693**	**1,650**

Key positions

Full-time equivalent	**2019**	**2018**
Directorate	**5,1**	**5,1**

Since October 2017, Eawag's Directorate has consisted of seven people: the Director, the Deputy Director, a Head of Operations and four other members, two of whom hold professorships – one at ETH Zurich, one at EPFL. These institutions are responsible for these two members' employment and salary costs, with EPFL charging 80% of the personnel costs to Eawag. The amount charged is included in the remuneration, and this member of the Directorate accounts for 0.8 FTE.

The increase is a result of the annual salary measures and higher social insurance contributions.

28 Events after the reporting date

Eawag's annual financial statements were approved by the Director and the Deputy Director on 24 February 2020. No significant events have occurred to date which would necessitate a disclosure in or an adjustment to Eawag's annual financial statements as at 31 December 2019.

EIDGENÖSSISCHE FINANZKONTROLLE
CONTRÔLE FÉDÉRAL DES FINANCES
CONTROLLO FEDERALE DELLE FINANZE
SWISS FEDERAL AUDIT OFFICE

Reg. Nr. 1.20312.937.00123.002

Report of the statutory auditor

to the Director of the Swiss Federal Institute of Aquatic Science and Technology, Dübendorf

Report on the audit of the financial statements

Opinion

We have audited the financial statements of the Swiss Federal Institute of Aquatic Science and Technology (Eawag), which comprise the statement of financial performance 2019, the balance sheet as of 31 December 2019, the statement of changes in equity and the cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion the financial statements (pages 3 to 33) present fairly, in all material respects, the financial position of the Eawag as of December 31, 2019, and its financial performance and its cash flows for the year then ended in accordance with the International Public Sector Accounting Standards (IPSAS) and legal requirements and the Accounting Manual for the ETH Domain.

Basis for Opinion

We conducted our audit in accordance with Swiss Law, International Standards on Auditing (ISAs), Swiss Auditing Standards and article 35ater of the Federal Act on the Federal Institutes of Technology (SR 414.110). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent based on the Federal Auditing Act (SR 614.0), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information in the Annual Report

The Executive Board of the Eawag is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. In this context, please refer to the section Report on other legal and regulatory requirements at the end of this report.

Responsibilities of the Executive Board of the Eawag for the financial statements

The Executive Board of the Eawag is responsible for the preparation and fair presentation of the financial statements in accordance with the International Public Sector Accounting Standards (IPSAS) and the legal requirements (Ordinance on the ETH Domain, SR 414.110.3; Ordinance on the Finance and Accounting of the ETH Domain, SR 414.123; Accounting Manual for the ETH Domain), and for such internal control as the Executive Board determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Executive Board of the Eawag is responsible for assessing the Eawag's ability to continue as a going concern, disclosing, as applicable, matters related to going concern.

Auditor's 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 our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards 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 aggregate, 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 Swiss law, ISA's and Swiss Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our 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.
- Obtain 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 Eawag's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.

- Conclude on the appropriateness of the Executive Board of the Eawag'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 the Eawag's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the notes to the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Eawag to cease to continue as a going concern.
- Evaluate 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.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Eawag to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements. We remain solely responsible for our audit opinion.

We communicate with the Executive Board of the Eawag and the Audit Committee of the ETH Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on other legal and regulatory requirements

In accordance with the Federal Auditing Act and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of the financial statements according to the instructions of the ETH Board.

In accordance with Art. 21 par. 2 of the Ordinance on the Finance and Accounting of the ETH Domain, we confirm that no contradictions exist between the personnel reporting in the annual report (management report) and the financial statements. Likewise, we confirm that no contradictions exist between the financial figures in the annual report (management report) and the financial statements.

Furthermore, in accordance with Art. 21 par. 2 of the Ordinance on the Finance and Accounting of the ETH Domain, we confirm that risk management has been appropriately conducted according to the instructions of the ETH Board.

We recommend that the financial statements submitted to you be approved.

Berne, 24 February 2020

SWISS FEDERAL AUDIT OFFICE

E.-S.

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Licensed audit expert

David Ingen Housz
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Aldo Todaro, Eawag

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