**INTRODUCTION**

Reliable and complete data are key to fisheries management under the common fisheries policy (CFP)[[1]](#footnote-1), which is based on the best available scientific advice. The main instrument for data collection and management[[2]](#footnote-2) is Regulation (EU) 2017/1004[[3]](#footnote-3) (the ‘data collection framework regulation’ or ‘DCF Regulation’), a recast of its 2008 predecessor[[4]](#footnote-4). The DCF sets out the harmonised approach for the Union-wide collection by Member States (MS) of biological, environmental, technical and socio-economic data for the fishing, aquaculture and processing sectors (Commission Staff Working Document (CSWD) Annex 1).

Under Article 23 of the DCF Regulation the European Commission is required to submit to the European Parliament and to the Council a report on the implementation and functioning of the Regulation. This report meets this obligation.

The DCF underlines the end-user-driven approach and the regionalisation of data collection, creating regional coordination groups (RCGs). Under the DCF, MS execute their data collection through national work plans and report on implementation through annual reports. For the first time, they can also submit regional work plans, coordinated at sea basin level, to supplement (or replace) relevant parts of national work plans.

The DCF empowers the Commission to adopt Commission decisions to establish a multiannual Union programme for data collection (EU MAP), which lays down detailed MS data collection obligations. The 2017-2019 EU MAP[[5]](#footnote-5) was already partly aligned with the DCF Regulation; the 2020-2021 EU MAP[[6]](#footnote-6) (consisting of two Commission decisions) is fully based on the DCF Regulation. Since 2014, the European Maritime and Fisheries Fund (EMFF)[[7]](#footnote-7) provides the MS with financial support for data-collection activities.

**IMPLEMENTATION AND FUNCTIONING OF THE LEGISLATION**

1. *Main players under the data collection framework*
	1. *Member States*

Member States are responsible for the collection and storage of data, the quality and completeness of the primary data, and data protection in line with legal obligations. All MS have a system in place for collecting, storing and managing data, and all have submitted national work plans (covering 2017-2019 and 2020-2021) for adoption by the Commission. The work plan is implemented by one or more scientific institutes in the MS, often depending on the size and diversity of the fisheries.

In line with legal obligations, all MS organise national coordination meetings and have designated a national correspondent, responsible for internal coordination, for making available data to end users and for liaising with the Commission. A stable network of national correspondents (under the subgroup of the Expert Group on Fisheries Data Collection) has significantly facilitated the cooperation between Commission services and national administrations.

* 1. *Regional coordination groups*

Under the regionalisation approach, RCGs support the implementation of the DCF and can submit regional work plans that improve coordination in the corresponding sea basins, to further underpin reliable scientific advice. As a member, the Commission participates in the annual and intersessional meetings. End users participate as observers (CSWD Annex 2).

Six new RCGs have been created since the entry into force of the DCF Regulation. Two of them merged in 2019, which means there are five RCGs at present: RCG Baltic; RCG North Atlantic, North Sea and Eastern Arctic; RCG Mediterranean and Black Sea; RCG Large Pelagics; and RCG Long Distance Fisheries (CSWD Annex 2). The pan-European Planning Group on Economics (PGECON) coordinates on socio-economic issues.

* 1. *End users*

End users deliver scientific advice or have research or management interests in the (scientific) analysis of data in the fisheries sector. Key end users are:

1. the International Council for Exploration of the Seas (ICES), which provides scientific advice on marine resources in the north-east Atlantic;
2. the Scientific, Technical and Economic Committee for Fisheries (STECF), a Commission expert group providing advice on a suite of issues (including data collection, discards policy, resource use in the Mediterranean and the economics of fleets);
3. scientific committees of regional fisheries management organisations, under sustainable fisheries partnership agreements, and other international organisations.

Commission services (the Joint Research Centre (JRC), DG MARE) are also end users, e.g. for fisheries and aquaculture economic analysis. The DCF allows for use of data by a wide range of end users. The group of key end users has remained relatively stable over the reporting period, with only a limited number of new end users added.

End users receive data through data calls issued to Member States or under reporting obligations (in the case of regional fisheries management organisations[[8]](#footnote-8)). In 2017-2019, 72 data calls and reporting obligations were completed (CSWD Annex 3).

* 1. *Regional databases hosts*

Regional databases facilitate the work of end users in the sea basins. The databases allow to review data completeness and reliability, and to correct and reduce data errors.

A single regional database exists for the four sea basins in the north-east Atlantic (Baltic Sea, North Sea, north-western and south-western Union waters). *Fishframe* is hosted by ICES, which stores, manages and uses the data. ICES performs data calls through another database (*Intercatch*) (CSWD Annex 3). Next to stock advice, this database has enabled ICES to produce and deliver regional overviews of fisheries and sampling designs for commercial fisheries. ICES aims to integrate both databases into one regional database and estimation system.

For the Mediterranean and Black Seas no regional database is in place despite a series of feasibility analyses. The Commission continues its efforts to identify a host for this database.

The JRC hosts an EU-wide database on fisheries and aquaculture data, including publicly available data. The JRC prepares the data which are used for specific topics (e.g. fleet balance, effort regimes) in support of the Commission services and STECF advisory work, but also for research by third parties. The JRC supports work under the DCF by hosting the Data Transmission Monitoring Tool and the DCF website[[9]](#footnote-9).

* 1. *European Commission*

Besides exercising its right of initiative to propose legislation, the Commission has several roles under the DCF to ensure proper implementation. It approves MS’ national work plans (54 MS work plans/amendments adopted between 2017 and 2020) and assesses their implementation through the annual reports (77 annual reports between 2017 and 2019), after evaluation by STECF.

The Commission supports MS and RCGs in implementing the data-collection obligations and maintains close and regular contacts through visits and meetings (CSWD Annex 4).

The Commission also periodically verifies MS’ compliance with the criteria for EMFF funding, assessing the quality and reliability of MS’ data transmission.

* 1. *Scientific, Technical and Economic Committee for Fisheries*

The DCF identifies STECF as the scientific body to evaluate the MS’ national work plans and annual reports and to evaluate data issues.

To ensure the scientific quality of the data requirements, STECF (CSWD Annex 5) is also consulted on the development and adoption of Commission decisions (e.g. EU MAP, templates for work plans and annual reports) and on data quality issues pertaining to these decisions.

* 1. *Expert Group on Fisheries Data collection and Committee for Fisheries and Aquaculture*

The Commission Expert Group on Fisheries Data collection[[10]](#footnote-10) has subgroups:

1. *National Correspondents group* to coordinate DCF implementation by MS;
2. *Liaison meeting* to coordinate RCGs on issues beyond marine regions;
3. *PGECON* to coordinate socio-economic data collection;
4. *Data IT systems group* – inactive.

Subgroup meetings took place each year during the implementation period. These subgroups have provided advice on a range of topics.

The Committee for Fisheries and Aquaculture has provided positive advice on the draft 2020-2021 EU MAP (implementing decision part).

1. *Main tools and activities under the Data Collection Framework*
	1. *Multiannual Union programme*

The DCF provides for the EU MAP that details the requirements for data collection by MS, lists mandatory scientific surveys at sea and sets thresholds for data collection. Obligations under the EU MAP reflect the identified needs of the end users for data (CSWD Annex 6).

The 2017-2019 EU MAP[[11]](#footnote-11) was followed by two Commission decisions[[12]](#footnote-12) forming the EU MAP 2020-2021, adopted in early 2019.

The EU MAP beyond 2021 is under preparation, involving broad stakeholder, end-user and scientific consultations (CSWD Annex 7). It will be aligned with the new EMFF and include updates of the lists of species and management areas, and of economic and social variables. It will also include a review of the requirements on data collection on sensitive species, recreational fisheries, diadromous species, aquaculture and marine ecosystems, as well as a review of the list of mandatory scientific surveys at sea and of thresholds for data collection.

* 1. *Multiannual work plans*

Under the EU MAP, MS submit to the Commission multiannual national work plans, following templates and submission guidelines set out in a dedicated Decision (CSWD Annex 8)[[13]](#footnote-13). After a scientific review by STECF, the Commission approves the work plans. MS can submit amendments to their work plans each year.

The Commission adopted 27 MS multiannual work plans for 2017-2019, plus 35 subsequent amendments (19 for 2018 to adjust to the DCF Regulation, and 16 for 2019). Amendments were made after i) observations by STECF or the Commission on the work plans adopted in 2016, ii) observations by STECF or the Commission on the MS’ annual report, iii) recommendations by RCGs and PGECON, and iv) changes in fisheries with effect on the sampling.

In December 2019 the Commission adopted 27 new work plans under the 2020-2021 EU MAP after positive assessment by STECF[[14]](#footnote-14).

* 1. *Annual reports*

MS are obliged to report annually on the implementation of their work plans, following formats and timetables under a dedicated Decision[[15]](#footnote-15). During the 2017-2019 reporting period all MS submitted annual reports on time.

STECF assesses the MS’ annual reports[[16]](#footnote-16). On this basis, and using the Data Transmission Monitoring Tool, the Commission engages with MS to ensure follow-up, in-year adjustments and integration of the conclusions into current work and planning. End users provide feedback on data transmission issues (‘failures’), which are analysed, categorised (by severity, type, coverage, quality, timeliness) and followed up with MS[[17]](#footnote-17). The Commission has accelerated its action since 2018 and this has resulted in positive trends in solving data transmission issues and improving MS’ performance.

In 2018-2019 the Commission analysed MS’ performance during 2014-2017 in light of the non-compliance criteria for funding under the EMFF. The performance of 21 MS was considered satisfactory. The analysis identified six MS whose performance and delivery of data needed significant improvement. In dialogue with these MS areas of improvements were identified and agreed, to be applied immediately and in the subsequent (amendments to their) work plans. With one of these six MS a specific *plan of actions* was agreed (strictly implemented since 2020). Performance over 2018-2019 will be assessed in the second half of 2020.

Data collected on fisheries in the outermost regions in support of scientific advice and CFP implementation in general has identified constraints. In 2020 STECF issued advice on improving data collection and DG MARE initiated a study to obtain a systematic overview of data needs and a possible future approach.

* 1. *Pilot studies*

Under the 2017-2019 and 2020-2021 EU MAPs, MS have to conduct pilot studies to explore and develop data-collection methods in several areas:

1. recreational fishing,
2. impacts of fishing activities on marine biological resources and marine ecosystems,
3. social data on employment, and
4. environmental data on aquaculture (CSWD Annex 9).

Most pilot studies are still being conducted, with full results expected in 2020-2022. Once finalised, their results are to be fully integrated into the MS’ regular data collection activities[[18]](#footnote-18), and where appropriate coordinated at marine sea basin level by the RCGs.

* 1. *Regional approach to implementation*

EU data-collection legislation has long sought to promote regional cooperation, and regional coordination meetings have been held since the mid-2000s. Following the regionalisation approach in the new CFP, the DCF provides for the creation of RCGs. Regional cooperation improves the efficiency and effectiveness of data collection through sharing of expertise, data, knowledge and tasks and through regional collaboration and standardisation. It is expected to bring about the harmonisation of national work plans and to eventually lead to regional work plans.

RCGs bring together the MS by sea basin to coordinate planning and implementation of data collection. All RCGs hold annual meetings (CSWD Annex 2) and most organise intersessional and subgroup meetings. Financial support for developing regional actions through the RCGs has been provided through study grants.

RCGs enhance consistency in data collection in a sea basin through agreed methodologies and approaches to respond to data calls, cooperation on scientific surveys run by MS (e.g. task sharing), coordination of sampling activities, addressing data issues (e.g. quality checks before data uploads, follow-up of issues reported in the Data Transmission Monitoring Tool) and coordination of work related to regional databases. RCGs also work at a pan-regional level for issues relevant to other sea basins. Their decisions and actions are laid down in recommendations (CSWD Annex 10), discussed with STECF every year, and proper follow-up is ensured.

Since 2017 RCGs have started developing regional work plans. In the process, RCGs have to consider possible changes in sampling, constraints in funding, the challenge of implementing common procedures among different MS and linking RCG work with that of the national administrations of the MS.

RCGs and PGECON meet periodically with the Commission, national correspondents and end users to coordinate and discuss data collection activities in the liaison, joint-decision and end-user meetings.

In the annual liaison meetings RCG/PGECON chairs, the Commission and end users work on the following:

1. ensuring convergence of RCGs’ work;
2. addressing and grouping recommendations by RCGs to allow for synergies;
3. strengthening the link between RCGs and PGECON;
4. identifying pan-European issues and proposing actions;
5. improving cooperation with end users and the Commission; and
6. giving visibility to RCGs and PGECON.

The annual meeting of the RCGs with end users (e.g. ICES, STECF, RFMOs) is key for identifying end users’ needs, for future data calls and for discussing data transmission issues.

1. *Financing of data collection*
	1. *Funding under shared management*

The EMFF is the legal basis for the EU funding of data collection. It provides for data collection funding under shared management between the Commission and MS authorities[[19]](#footnote-19). The EMFF funding facilitates the implementation and proper functioning of the DCF and, by extension, of the scientific advice[[20]](#footnote-20).

For 2014-2020, a total of EUR 532 million is earmarked for data collection by MS (CSWD Annex 11). This amount is allocated in national envelopes and is to be complemented by national funding (totalling 25% of EU funding).

A Fisheries and Aquaculture Monitoring and Evaluation[[21]](#footnote-21) report on DCF expenditure for MS during the EMFF period provides financial information on various elements of data collection. Staff and research vessels account, on average, for almost 80% of total DCF costs while the collection of economic and social data accounts for about 7-8%. This means that around 90% of the costs are directly or indirectly related to collection of biological and environmental data.

Compliance, as a condition for EMFF funding, is tested against five criteria set out in Regulation (EU) 2015/1930[[22]](#footnote-22). Non-compliance can lead to suspension, interruption or recovery of financial support[[23]](#footnote-23). MS have performed well against these criteria overall. No infringements of data-collection obligations were identified and no financial actions initiated during the reporting period.

* 1. *Funding of regional grants under direct management*

The Commission has provided support to strengthen regional cooperation through an action grant[[24]](#footnote-24). The awarded studies (totalling almost EUR 2 million) have delivered tools, formats and methodologies, including data-sharing agreements at regional level, for regional sampling for data collection on shared stocks (CSWD Annex 12). Four studies were funded: FishPi2 (fisheries biological data in the North Sea, eastern Arctic and north Atlantic); STREAM (fisheries biological data in the Mediterranean and Black Sea); RECOLAPE (highly migratory species); and SECFISH (socio-economic data for fisheries, aquaculture and processing)[[25]](#footnote-25).

The studies were concluded in mid-2019 and have provided a suite of possible tools and proposals for MS’ activities, notably in areas of new challenges, with a regional dimension (e.g. data on protected and sensitive species, small-scale fisheries and marine recreational fisheries). The results can be used for development of regional work plans; alternatively, they could be used in a coordinated manner in national work plans.

**CONCLUSIONS**

Reliable and complete data are the backbone for the development of the best available scientific advice, which in turn is key to decision-making and management under the CFP.

Regulation (EU) 2017/1004 creates the DCF. It is a well-established regulatory regime, providing the appropriate structure, tools and flexibility for data collection by MS in the fisheries and aquaculture sectors, in support of science and scientific advice.

As a decentralised system where MS collect, hold and submit the data to end users, the DCF depends crucially on the complex coordination between the players concerned. These are in particular the *Commission*, which oversees and supports the implementation; the *Member State bodies*, which collect the data; the *regional coordination groups,* which standardise methods and processes at the regional level; and the *end users* of the data. The latter are fundamental in defining data needs and providing feedback on the quality of the data submitted.

The necessary structures and operating arrangements for this process are by now well understood, used and accepted by all players involved, including internationally. The appointment of national correspondents has been important for systematising collaboration on implementation between the Commission and the Member States. EU funding for data collection under the EMFF shows a relatively high uptake, which could be interpreted as a commitment by Member States to invest in and deliver on data collection. The active engagement of the Commission (supported by STECF) with the Member States allows for continued monitoring and improvements.

Under the new CFP, the DCF puts stronger emphasis on regionalisation. The RCGs are developing their role and have become more solidly anchored during the reporting period, resulting in consolidation of their working methods. With the support of specific study grants, the first tangible results were obtained (in the form of tools and proposals for regional sampling for different regions). In expanding and intensifying their operations, RCGs are now facing operational limitations and may require further support for their functioning in the coming period. Future developments should result in regional work plans, to be agreed at RCG level and implemented by MS, and in the identification of a host for the regional database for the Mediterranean and Black Sea and its subsequent implementation.

The overall focus for the next years of the DCF should be on solidifying its implementation in continued cooperation with the MS. This includes addressing upcoming challenges (such as on protected, endangered and threatened species or broader ecosystem knowledge); responding to and integrating evolving data needs (as identified by end users); streamlining and simplifying processes; and further improving and harmonising methods and their application at sea-basin level. For the EU MAP from 2021, both MS and the RCGs have clear challenges ahead: to ensure the results of the pilot and grant studies are integrated into the MS’ national work plans, and to ensure RCGs prepare regional work plans, notably for the new challenges.

Predictability for the many players in data collection is a vital prerequisite to ensure the long- term functioning of data collection and, by extension, of scientific advice under the CFP. In addition to providing a stable outlook for the DCF and related legislation, the allocation of sufficient funding under the new EMFF, from both Union and national sources, is crucial.

1. Regulation (EU) 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC, OJ L 354, 28.12.2013, p. 22. [↑](#footnote-ref-1)
2. Other legislation may have independent data collection obligations, such as the Deep Sea Regulation, the Control Regulation; also internationally agreed obligations, such as the ICCAT Regulation, a multiannual recovery plan for Bluefin tuna in the eastern Atlantic and the Mediterranean, a multiannual recovery plan for Mediterranean swordfish, the NAFO Regulation, the CCAMLR Regulation, the SPRFMO Regulation and the tuna-regional fisheries management organisations Regulation. [↑](#footnote-ref-2)
3. Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008, OJ L 157, 20.6.2017, p. 1. [↑](#footnote-ref-3)
4. Council Regulation (EC) 199/2008 of 25 February 2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy, OJ L 60, 5.3.2008, p. 1. [↑](#footnote-ref-4)
5. Council Regulation (EC) 199/2008 of 25 February 2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy, OJ L 60, 5.3.2008, p. 1. [↑](#footnote-ref-5)
6. Commission Delegated Decision (EU) 2019/910 of 13 March 2019 establishing the multiannual Union programme for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors, OJ L 145, 4.6.2019, p. 27. [↑](#footnote-ref-6)
7. Regulation (EU) 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council, OJ L 149, 20.5.2014, p. 1. [↑](#footnote-ref-7)
8. For institutional reasons, where the Commission represents the EU as a Contracting Party in regional fisheries management organisations the Commission requests MS submissions of the necessary data and reports and forwards the data to the organisations. The General Fisheries Commission for the Mediterranean (GFCM) is an exception because part of the data is sent by Member States themselves. [↑](#footnote-ref-8)
9. <https://datacollection.jrc.ec.europa.eu/index.html> [↑](#footnote-ref-9)
10. <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=2750> [↑](#footnote-ref-10)
11. This EU MAP was already partly aligned with the new DCF Regulation, notably regarding: 1) data collection based on end users’ needs and adapted per marine regional level; 2) data allowing for science and resource management aligned with the CFP objective of maximum sustainable yield and the landing obligation; 3) data on the impact of fisheries on the broader marine environment (ecosystems, protected species, habitats); and 4) more data on recreational fisheries, aquaculture, fisheries economics and fish processing. [↑](#footnote-ref-11)
12. The split is a consequence of new provisions in the DCF Regulation (Article 4(1)). [↑](#footnote-ref-12)
13. Commission Implementing Decision (EU) 2016/1701 of 19 August. [↑](#footnote-ref-13)
14. For 21 of these work plans STECF submitted comments to be considered for future submissions. [↑](#footnote-ref-14)
15. Commission Implementing Decision (EU) 2018/1283 of 24 August 2018. [↑](#footnote-ref-15)
16. <https://stecf.jrc.ec.europa.eu/reports/dcf-dcr> . [↑](#footnote-ref-16)
17. While the large majority of end users provide feedback, there are exceptions – e.g. GFCM has not provided end-user feedback broken down by MS. [↑](#footnote-ref-17)
18. Preliminary results are already being integrated into MS’ regular data collection activities, or MS are exploring alternatives where tested methods did not bring expected results. [↑](#footnote-ref-18)
19. Before 2014 data collection was financed under a direct management system. [↑](#footnote-ref-19)
20. The interim evaluation study of the implementation of the direct management component of the EMFF concludes: ‘Overall the scientific advice and data collection funded through EMFF direct management is delivered through well-established processes to ensure that advice and data are effective in informing CFP objectives’ (p.53). The period related to this report was 2014-2016. During this time data collection and scientific advice were implemented under the direct management system. <https://op.europa.eu/en/publication-detail/-/publication/1f424d68-d670-11e8-9424-01aa75ed71a1/language-en> [↑](#footnote-ref-20)
21. Fisheries and Aquaculture Monitoring and Evaluation support unit for the EMFF, categories of spending for data collection - final report 2020. Not publicly available. The relevant period for the data is 2017 and/or 2018, the most recent years for which data were available. Not all MS were surveyed. [↑](#footnote-ref-21)
22. Commission Delegated Regulation (EU) 2015/1930 of 28 July 2015 supplementing Regulation (EU) No 5508/2014 of the European Parliament and of the Council on the European Maritime and Fisheries Fund as regards the criteria for establishing the level of financial correction and for applying flat rate financial corrections, and amending commission Regulation (EC) No 665/2008, OJ L 282, 28.10.2015, p. 2. [↑](#footnote-ref-22)
23. The criteria are the following: collection of data, national coordination of data collection activities, regional coordination with the Member States, submission of annual reports, and provision of data to end users (data transmission failures). [↑](#footnote-ref-23)
24. MARE 2016/22, <https://ec.europa.eu/fisheries/call-proposals-mare201622_en> [↑](#footnote-ref-24)
25. <https://datacollection.jrc.ec.europa.eu/regional-coordination> [↑](#footnote-ref-25)