



# **Study on Engine Power Verification by Member States**

**Meeting of the EMFF Expert Group  
Brussels 12 June 2019**

**Justine Jury  
DG MARE  
Unit D4 - Fisheries Control & Inspection**

# Engine power - The regulations

- **Art 38 CR: Fishing Capacity**
  - MS are responsible for the necessary checks to ensure that the total capacity in GT and in kW, shall at any moment not be higher than the maximum capacity levels established for that MS.
- **Art 39 CR: Fishing Capacity**
  - MS shall ensure that certified engine power is not exceeded and it is prohibited to fish with a vessel equipped with an engine more powerful than that stated in the fishing licence.
- **Art 40 CR: Certification of Engine Power**
  - For new, replacement or modified propulsive engines >120 kw, MS shall certify (and issue certificates) that they are not capable of developing more *maximum continuous* engine power than stated in the engine certificate (excludes vessels using exclusively static gear, dredge gear, auxiliary & aquaculture vessels).
  - Certified engine power shall be stated in a vessel's fishing licence.
  - Prohibited to use a propulsion engine if such engine has not been officially certified. (or if exceeds the power established in the fishing licence – delete?).
- **Art 41 CR: Verification of Engine Power**
  - MS shall conduct **data verification** of certain information (VMS, fishing logbook, sea trial certificates etc) **following risk analysis and according to a sampling plan** (detailed in IR 62).
  - Where there are indications of engine power being greater than stated in fishing licence, MS shall conduct **physical verification** of engine power.
- **Art 62 IR: Verification & Sampling Plan**
  - MS shall establish a sampling plan to ID vessels or groups with a risk of under-declaration of engine power:
    - based at a minimum on one or more specified risk criteria (subject to effort regimes, power limitations, ratio of kw:GT is 50% lower than the average for same type of vessel, species and gear (MS may divide fleet according to criteria))*
  - From each group a random sample shall be taken (equal to the square root of vessels in group).
  - Data analyses conducted (→ **possible** physical verification as per Art 41 - if indications of power exceeding that stated on fishing licence)
- **Art 63 IR: Physical Verification**
  - Defined as a `physical verification of propulsion power

# Study – why was it necessary?

- Verification of engine power was a key element of the reform of the EU control system in 2009 (the introduction of the CR).
- Without effective controls there is a risk that MS capacity ceilings may be exceeded with a resulting imbalance between fishing capacity and fishing opportunities which may jeopardise the objectives of the CFP.
- Issues identified:
  - Slow implementation by MS of sampling plans – in 2012 16 MS subjected to EU pilot procedures (all closed)
  - For some MS complaints received by COM – reporting engine power exceeds certified power in some cases.
- COM priority to undertake assessment of the control system in MS, the quality of sampling plans, to identify best practices, to identify if engine power verification is an effective tool to control effort, and inform policy development.
- COM inspectors do not have capacity to test engines, thus services of technical specialist required.

# Objectives

- **To inform the Commission on the effectiveness of verification of engine power by MS**
- In particular to enable the COM to assess:
  - - the complaints in MS
  - - the efficiency and reliability of the sampling plans developed by the MS
  - - the approach to risk analysis and design of sampling plans
  - - the implementation of the sampling plans
  - - whether the control of engine power is a good indicator for controlling the fishing effort of the fleet
- And to identify best practices on sampling and power measurement that will help develop policy on the system of control of engine power.

# Scope

- 12 month period – extended by 6 months due to delays of tests in MS
- 15 MS covered (BE, DE, DK, EL, ES, FI, FR, IE, IT, LV, NL, PL, PT, SE, UK)
- Contract awarded January 2018 – Consortium of 2 companies & 2 subcontractors led by 'Roos Diesel Analysis (RDA Shiptech)' (NL)
- Meetings to discuss control strategy and application of sampling plans in 15 MS (COM accompanied for some)
- Un-announced physical engine power verifications of **80** in **15 MS** (68 in 14 was achieved) from **6 areas and fisheries**
  1. Atlantic pelagic trawlers;
  2. Bottom otter trawlers operating in the Mediterranean Sea, Strait of Sicily and Adriatic Sea;
  3. Beam trawlers operating in the North Sea;
  4. Deep sea long liners operating in the waters of the Azores and Madeira;
  5. Pelagic trawlers operating in the Baltic Sea;
  6. Pelagic trawlers operating near the Cantabrian coast.
- no. vessels/MS proportional to MS fleet size – vessels selected (risk assessment)
- Draft final report delivered in April, censored and sent to MS control personnel for discussion & feedback
- Report to be finalised now & published.

# Results - 1

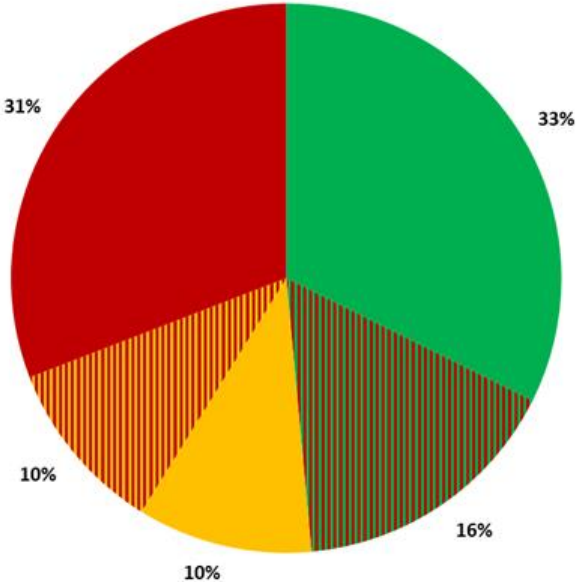
## Analyses of MS implementation of framework of control in accordance with the Control Regulation

	Sampling plan developed and implemented	Interval between data verification rounds (months). No interval (once-f) indicated as OO	Vessel group determination in order to determine sample size as required by (EC 404/2011. Art 62(1))	Number of vessels selected for data verification (2012 - 2017)	Number of data verifications (2012 - 2017)	All criteria (EC 1224/2009 ART 41(1)) used for analysis of vessels (data verifications)	Further criteria in addition to (EC 1224/2009 ART 41(1)) minimum requirements used for analysis.	All vessels subject to data verification visited by MS inspector – not required by (EC 1224/2009 ART 41(1)).	Number of vessels identified as potentially non-compliant (by data verification)	Nr. of physical verifications (2012 – 2017) following data verification indications of non-compliance.	Nr. of physical verifications 2012 – 2017 <del>not</del> following data verification indications of non-compl. (power measurements for certification not included)	Number of <b>infringements</b> confirmed by a physical verification	Infringement % of vessels selected for data verification
MS1	Y	OO	N	12	13	N	Y	N	2	0	0	0	0%
MS2	Y	12	Y	216	216	Y	N	N	0	0	0	0	0%
MS3	U/K	OO	Y	39	U/K	U/K	U/K	U/K	0	0	0	0	0%
MS4	Y	12	Y	232	232	Y	Y	N	3	0	0	0	0%
MS5	Y	12	Y	102*	102*	Y	Y	N	0	0	26	4	3,9%*
MS6	Y	OO	Y	30	30	Y	N	Y	0	0	0	0	0%
MS7	N	-	-	-	-	-	-	-	-	-	-	-	-
MS8	Y	12	Y	1	1	Y	N	N	0	0	1	0	0%
MS9	Y	6	Y	U/K	U/K	Y	N	Y	0	0	0	0	0%
MS10	N	-	-	-	-	-	-	-	-	-	-	-	-
MS11	Y	OO	Y	16	16	Y	N	N	0	0	0	0	0%
MS12	Y	OO	Y	44	0	U/K	U/K	U/K	0	0	0	0	0%
MS13	Y	12	Y	97	97	Y	N	N	16	16	12	9	9,3%
MS14	N	-	-	-	-	-	-	-	-	-	-	-	-
MS15	Y	OO	Y	200*	200*	Y	N	N	0	0	0	0	0%
Total				989*	907*				21	16	39	13	1,3%*



# Results - 2

## Engine power verifications



- =< 100% of licensed power
- =< 100% of licensed power, but secondary indications of non-compliance
- 100% < licensed power =< 115%
- 100% < licensed power =< 115%, but secondary indications of >15% non-compliance
- > 115% of licensed power

# Conclusions

## Compliance –

- Tests of 68 fishing vessels across 14 Member States showed that **misreporting of engine power is a widespread within the sample.**
- non-compliance (or indications of) was found in every MS and in every investigated fleet segment

## Certification –

- current systems of certification **do not effectively meet the objective** to 'ensure that the certified engine power is not exceeded' (CR Art. 39 (2)).
- certification tasks delegated by CA to another body in all MS in study (classification society or other state department)
- In some MS systematic mismatch between certified & real power = often reliance on declarations from engine manufacturer
- 3 MS systematically conduct engine test upon certification (good practice)

## Verification system (sampling plan > desk analysis > test)–

- Some MS have no system implemented at all
- Some MS have applied desk analysis once only, others do so regularly
- Only 1 MS has tested engines within CR framework (following sampling plan>desk analysis). 2 others tested beyond CR framework. 2 MS have identified non-compliance 13 vessels
- Given high rate of non-compliance of engines detected in this study = even when applied the system is ineffective



# Recommendations

- 1. Improve certification process**
- 2. Standardise certificates across MS**
- 3. Define 'de-rating' in legislation**
- 4. Eliminate risk of excessive non-compliance for new engines**
- 5. Continuous monitoring (in line with COM proposal for CR revision)**
  1. Estimated cost of €11-15,000 per vessel
  2. Requires robust systems, systematic data extraction & processing by trained inspectors
  3. Prioritise vessels according to risk
  4. 30 day 'portable' options as alternative to 'continuous' monitoring
  5. Not feasible for small vessels
- 6. Other possible tools to control engine power, alone or in combination include:**
  1. Limiting propeller pitch
  2. Evaluation of electronic engine data
  3. Sealing engine settings
- 7. Amplify requirement for physical verifications**
- 8. Standardise & improve physical testing methodologies across MS**
- 9. Ensure definition of engine power in regulations is consistent & appropriate**

# Next Steps

- All 15 MS will receive their own individual report
- Control must be improved – non-compliance rate and magnitude is deeply concerning
- COM will require confirmation that:
  - All MS where non-compliance detected are taking follow up action against operators
  - MS with deficiencies identified in sampling plans or implementation of them expected to improve system
- Implications of non-compliance on other regulations (regarding emissions control etc) to be further assessed with repercussions expected
- Report will be used to inform ongoing negotiations for the Revision of the CR
  - Control must be enhanced → COM proposal for continuous monitoring of engine power
- Need for standardisation and technical guidance to be developed - Possible role for EFCA?

# Questions?