Mattilsynet

Statens tilsyn for planter, fisk, dyr og næringsmidler

18000 RIMSTAD

INDEPENDENT CONTINENTAL COMPARTMENT

The new compartment Rimstad

The compartment consists of a single, closed farm located in Tingvoll municipality, Møre og Romsdal County.

- **Type of facility:** land based stripping and incubation station for brood stock
- **Species**: Atlantic salmon and Rainbow trout
- **Purpose**: production of eyed salmon and rainbow trout eggs

Departments of the facility

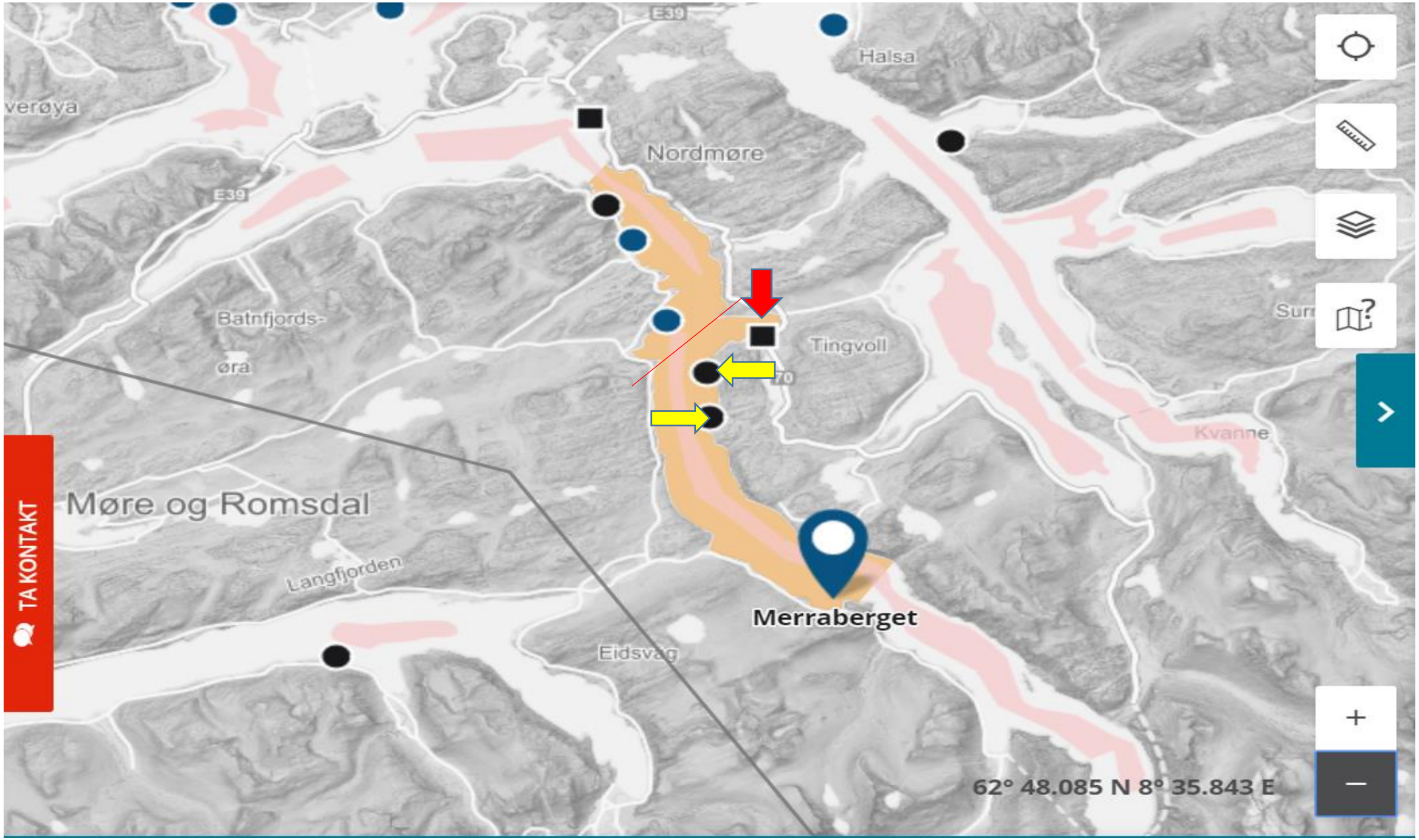
- A) tanks for keeping the maturing brood fish, and the adjacent stripping facilities.

- B) egg incubation department.

Departments A) and B) are distinctly separated for practical and biosafety reasons. Both departments only use freshwater in its production.

Former compartment Tingvoll

- 18000 Rimstad previously belonged to a larger compartment Tingvoll, which was granted ISA-free status on historical grounds in 2008.
- In addition to Rimstad, the former compartment Tingvoll consisted of three brood stock sea farms.
- Compartment Tingvoll held its ISA-free status until July 2017.


E39
Halsa
verøya
Nordmøre
E39
Batnfjords-
øra
Tingvoll
70
Kvanne
Møre og Romsdal
Langfjorden
Merraberget
Eidsvåg
TA KONTAKT
62° 48.085 N 8° 35.843 E

Map – former compartment Tingvoll

- 18000 Rimstad – land, brood fish + stripping/incubation (red arrow)
- 12904 Merraberget – sea, brood fish (blue marking)
- 12896 Hegerbergtrøa – sea, brood fish (yellow arrow)
- 12897 Honnhammarvika – sea, brood fish (yellow arrow)

- The demarcation of the previous compartment against neighboring facilities is marked by a red line

ISA outbreak Rimstad and Merraberget

- Suspicion of ISA at Rimstad notified by operator 07.07.2017. (Surveillance samples).
- ISA was confirmed at 18000 Rimstad 13.07.2017.
- ISA was confirmed at 12904 Merraberget 13.07.2017 (3 positive PCR, contagious contact Rimstad).
- 25.05. – 01.06.2017: brood fish moved from sea site Merraberget to Rimstad.
- Virus sequencing done at NRL showed a 100 percent similarity between isolates from Rimstad and Merraberget.
- The Norwegian Veterinary Institute (NRL) concluded that the ISAV-isolate was a new isolate, not previously detected in Norway.

ISA outbreak - conclusions

- The outbreak at Merraberget was regarded a primary outbreak.
- **Probable mechanism**: HPR0 mutation and deletion.
- **Conclusion**: virus transmission to land site Rimstad was caused by transfer of (sub-clinically) infected fish from sea site Merraberget.

Veterinærinstituttet
Norwegian Veterinary Institute

Oslo
Ullevålsveien 68
Postboks 750 Sentrum 0106 OSLO
Sentralbord: +47 23 21 60 00 Telefax: +47 23 21 60 01

AquaGen
Post box 1240
7642 TRONDHEIM

Your ref.: Torkjel Bruheim | Our ref.: 2017-60-2596 | Date: 22.06.2018

Samples received 20.07.2017 – statement on sequences for ISA-virus

Owner: AquaGen AS
Site: Merraberget (Location number 12904)
Date of sampling: 19.07.2017

ISA-virus isolated in ASK cells from sample number 3 has been sequenced, and the obtained sequences show 100% identity with sequences for ISA-virus from site Rimstad (Location number 18000) in the investigated parts of segment 5 and segment 6.

Sincerely,
Torfinn Moldal
Torfinn Moldal
Veterinarian

Estimated measurement uncertainties for quantitative methods are available on request. The results relate only to the samples tested. This report shall not be reproduced except in full without a written approval

Statement from the Norwegian Veterinary Institute:

«(…) the obtained sequences (Merraberget) show 100 % identity with sequences for ISA-virus from site Rimstad in the investigated parts of segment 5 and segment 6.»

Handling of the outbreak

- NFSA suspended trade and imposed restrictions on the compartment from 07.07.2017, in accordance with article 53 (2006/88/EC).
- All fish at Rimstad was destructed – no biological material was left at the site 17.07.2017.
- All fish at Merraberget was slaughtered by 31.07.2017.
- There were never any stripping of the infected broodstock at Rimstad.
- NFSA established a containment area comprising Merraberget and the adjacent sea sites – Rimstad was not included.
- Rimstad was cleaned and disinfected and started fallowing 21.09.2017 (verified by inspection).

Restocking

- Rimstad was restocked with fish from 12917 Sjølseng (category I for ISA) 19.02.2018.
- No additional fish have been moved onto the site after 19.02.2018.
- Fallowing period: 21.09.2017-19.02.2018 (21 weeks, 4 days).
- Measures taken at Rimstad meet the requirements in Commission implementing decision (EU) 2015/1554, Annex I, part 3, point I.2.2.2.

Commission impl. Decision (EU) 2015/1554 ANNEX I, part 3

I.2.2.2. Requirements concerning regaining disease-free status for continental compartments comprising one single farm that was previously declared as having Category I health status

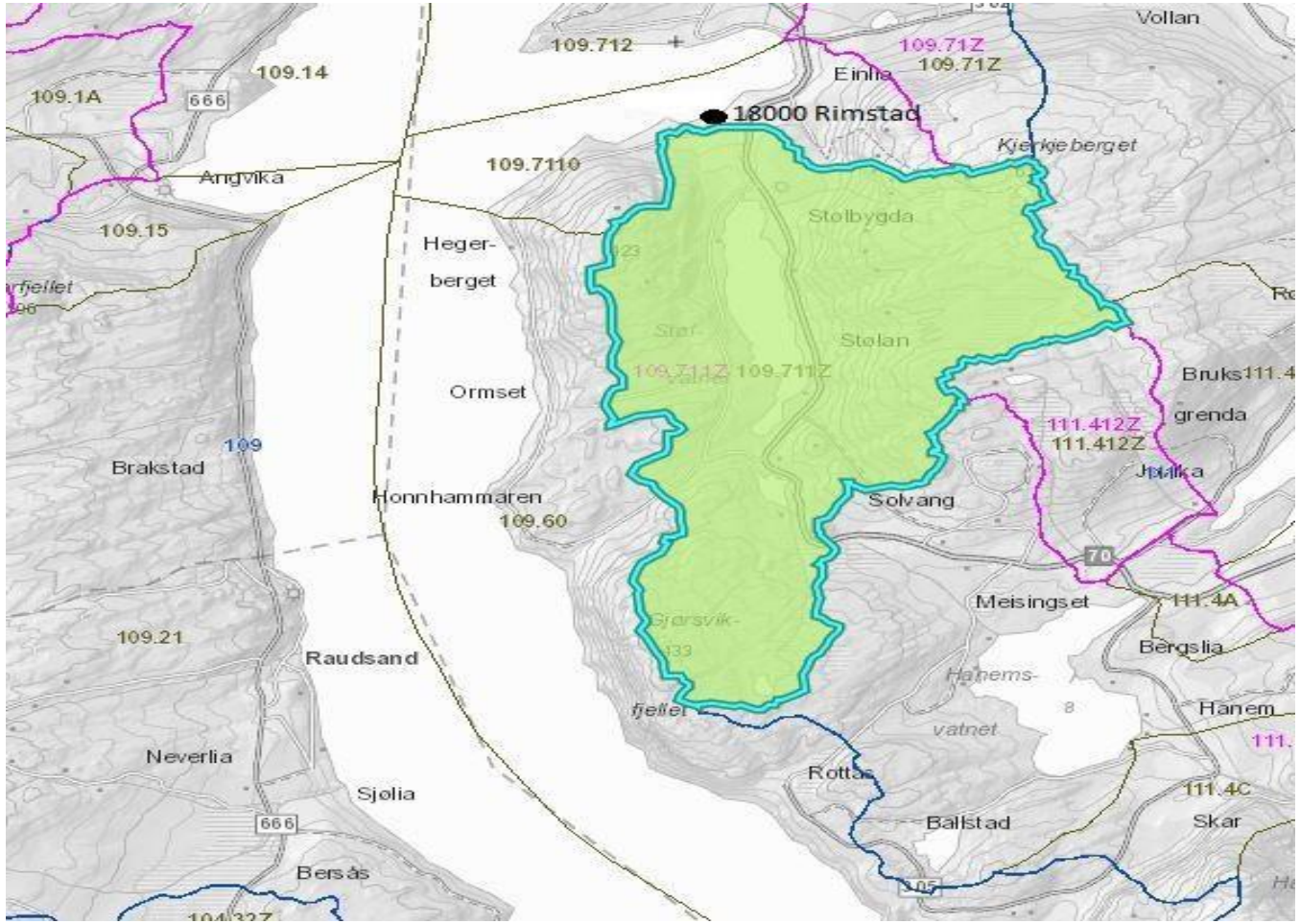
A continental compartment comprising one single farm that has Category I health status with regard to ISA, whose health status is independent of the surrounding natural waters in accordance with point 3 of Part II of Annex V to Directive 2006/88/EC, and whose Category I health status has been withdrawn in accordance with Article 53(3) of that Directive, may regain it again immediately after the competent authority has confirmed that it complies with the following conditions:

- **(a) it has been emptied, cleansed, disinfected and fallowed; the duration of the fallowing period shall be at least 6 weeks;**
- **(b) it has been restocked with fish sourced from Member States, zones or compartments with a Category I health status as regards ISA.**

Rimstad – independent compartment

- 18000 Rimstad is a continental farm whose health status is independent of the surrounding natural waters in accordance with Directive 2006/88/EC, Annex V, part II section 3.
- The compartment includes the land base itself and the freshwater source Stølsvatnet, which is the only water source used in the compartment.
- There are no other aquaculture activities in connection with the water source Stølsvatnet

Declaration 18000 Rimstad
Map water catchment area



Biosecurity - water treatment

- Closed waterpipes from an inlet at 10 meters depth in the water source are leading the water from Stølsvatnet to the site.
- The inlet water is filtered (10µm) and treated with UV before release to the fish tanks and the incubators for ovas.
- Due to natural barriers in the river leading from Stølvatnet to the sea, no anadromous fish can enter the water source.
- The bottom of the tanks with the fish is at the lowest 2 meters above sea flood level. There is no possibility that sea water or fresh water from outside can reach the brood stock facility.

Water treatment facility (filtration, UV)

Anadromous fish has no access to the river draining the water source

Biosecurity – all-in, all-out

- 18000 Rimstad is run on an all-in, all-out principle between generations.
- Site will be used to hold brood fish only for a few months each year.
- Only broodfish from full cycle land based ISA-free compartments will be transferred and stripped at Rimstad for the first two years of production.
- The transport of broodfish from these land based facilities will be by tanks on trucks.

Biosecurity – brood stock from sea sites

- When the Tingvoll sea sites are declared with ISA free status, it will be possible to stock Rimstad from the ISA-free sea sites again.
- The operator will primarily use company owned boat for the transport.
- If an external wellboat is required, the boat will be taken on land in a shipyard, washed and disinfected followed by a veterinary inspection and attestation.

Biosecurity – health controls and sampling

- The site has internal hygienic procedures for the staff, visitors and equipment entering the compartment.
- The fish health service conducts at least one health control every month and additional controls in case of increased mortality or observed changed behavior of the fish.
- Every brood fish that dies the last 9 months before stripping and in the stripping period is obliged to autopsy by veterinarian, aqua medicine biologist or by educated, trained person on the plant.
- The sampling is risk based depending on gross pathology. (PCR).
- Welfare parameters such as mortality and environmental indicators like temperature, pH, oxygen and CO2 levels are continuously monitored at the site.

Time line - declaration of 18000 Rimstad

- The Norwegian Food Safety Authority sent the original declaration for 18000 Rimstad via the Ministry of Trade and Industry to ESA on 13.02.2018.
- Meanwhile, on 19.02.2018, the operator transferred 2747 fish from the ISA-free continental farm 12917 Sjølseng to Rimstad.
- Having become aware of the Commission's assessment of discrepancy between the Directive and (EU) 2015/1554, The Norwegian Food Safety Authority decided to withdraw the declaration for Rimstad on 12.04.2018.
- The Rimstad operator chose to start 100 percent sampling of fish at the site as of 01.05.2018

Sampling – risk based, then 100 % testing

As a consequence of (EU) 2015/1554 not being applicable, two sampling periods with different test regimes have been performed at Rimstad:

- a) 19.02.2018 - 30.04.2018: **risk-based sampling** - live fish with clinical symptoms / abnormal behavior and freshly dead fish with pathological changes (all dead fish are assessed by autopsy)
- b) 01.05.2018 - 15.08.2018: **100% sampling** of all individuals

Sampling – dead fish

Sampling period **a) 19.02.-30.04.2018**

- A total of 67 dead fish in the period - 41 dead fish tested, 26 dead fish not tested
- 0 live fish with clinical symptoms / abnormal behavior

Sampling period **b) 01.05.-15.08.2018**

- A total of 26 dead fish in the period - all individuals tested
- 0 live fish with clinical symptoms / abnormal behavior

- For the periods **a)** and **b)** the total number of dead fish is 93, of which 67 dead fish have been tested.

Sampling – 99 % of fish landed at Rimstad

- In the period 19.02. - 30.04.2018, 26 dead fish were not tested, as these individuals in autopsy did not show any pathological changes, or exhibited signs of autolysis.
- **Apart from the 26 dead fishes in the abovementioned period a), all individuals at Rimstad are sampled, which counts 2721 fish (live fish killed post stripping and mortalities).** Percentage of sampled fish of total fish transferred from Sjølseng to Rimstad thus equals 2721/2747 * 100 = **99.05%**

Laboratory and test methods

- All samples are analyzed at the accredited, designated laboratory Patogen.
- Method: RT-qPCR analysis of mid-kidney and heart.
- No samples are pooled – 2721 individual samples of heart and mid-kidney, respectively (5442 samples).
- All samples collected, prepared, handled and analyzed in accordance to relevant provisions in EC 2015/1554 (Annex I, part 3, section II and Annex II, part 3, section I and II).
- All samples negative.

Number of fish stripped at Rimstad

Total number of fish transferred from Sjølseng to Rimstad	2747
-Total number of dead fish	-93
Live fish during the stripping period	2654
Fish not stripped due to lack of maturation*	-971
Number of fish stripped (18 male/1665 female)	**1683**

*fish not stripped due to lack of maturation were killed and sampled in the period 23.07.-16.08.2018.