**Table S3** Erroneously predicted samples by Quantile Regression Splines (QRS), Random Forest (RF) and both methods (RF+QRS) and the difference between the IQIMA 0.64-good/moderate boundary and the sample’s classified IQIMA for a) Norway and b) Scotland salmon farms. With red are the values that differ ≤ 0.1 from the 0.64 good/moderate boundary.

1. Norway

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| --- | --- | --- | --- | --- |
| **QRS+RF wrong predictions**  | IQIMA | IQIMA difference from threshold | IQIQRS | IQIRF |
| HJ\_588\_RepA | 0.73 | 0.09 | 0.54 | 0.41 |
| HJ\_588\_RepB | 0.73 | 0.09 | 0.55 | 0.46 |
| NK\_140\_G2\_RepB | 0.67 | 0.03 | 0.37 | 0.46 |
| NK\_640\_G2\_RepC | 0.66 | 0.02 | 0.49 | 0.58 |
| ST\_68\_G1\_RepB | 0.42 | 0.22 | 0.74 | 0.70 |

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| --- | --- | --- | --- |
| **QRS-wrong predictions** | IQIMA | IQIMA difference from threshold | IQIQRS |
| AK\_630\_G1\_RepA | 0.74 | 0.1 | 0.58 |
| BJ\_280\_G2\_RepA | 0.72 | 0.08 | 0.63 |
| BV\_1110\_G2\_RepC | 0.73 | 0.09 | 0.60 |
| BV\_430\_G1\_RepB | 0.73 | 0.09 | 0.61 |
| BV\_430\_G2\_RepB | 0.74 | 0.1 | 0.60 |
| HJ\_50\_RepB | 0.1 | 0.54 | 0.66 |
| KA\_290\_RepA | 0.61 | 0.03 | 0.68 |
| KA\_290\_RepB | 0.61 | 0.03 | 0.74 |
| NK\_640\_G2\_RepA | 0.66 | 0.02 | 0.56 |

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| --- | --- | --- | --- |
| **Rf-wrong predictions** | IQIMA | IQIMA difference from threshold | IQIRF |
| BV\_430\_G1\_RepC | 0.73 | 0.09 | 0.58 |
| BV\_430\_G2\_RepC | 0.74 | 0.1 | 0.55 |
| HJ\_488\_RepA | 0.68 | 0.04 | 0.51 |
| HJ\_488\_RepB | 0.68 | 0.04 | 0.60 |
| KA\_428\_RepA | 0.7 | 0.06 | 0.63 |
| KA\_428\_RepB | 0.7 | 0.06 | 0.64 |
| KA\_504\_RepB | 0.64 | 0 | 0.60 |
| NK\_140\_G1\_RepB | 0.67 | 0.03 | 0.56 |
| NK\_140\_G1\_RepC | 0.67 | 0.03 | 0.64 |
| ST\_68\_G1\_RepA | 0.42 | 0.22 | 0.70 |
| ST\_68\_G1\_RepC | 0.42 | 0.22 | 0.69 |
| ST\_68\_G2\_RepB | 0.7 | 0.06 | 0.63 |

1. Scotland

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **QRS+RF wrong predictions**  | IQIMA | IQIMA difference from threshold | IQIQRS | IQIRF |
| S01\_50NE\_RepA | 0.79 | 0.15 | 0.56 | 0.45 |
| S05\_25S\_RepA | 0.61 | 0.03 | 0.64 | 0.67 |
| S05\_50N\_RepB | 0.67 | 0.03 | 0.56 | 0.52 |
| S06\_Start2\_RepA | 0.64 | 0 | 0.45 | 0.32 |
| S07\_100SE\_RepB | 0.75 | 0.11 | 0.60 | 0.61 |

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| --- | --- | --- | --- |
| **QRS-wrong predictions**  | IQIMA | IQIMA difference from threshold | IQIQRS |
| S01\_Ref2\_RepB | 0.85 | 0.21 | 0.63 |
| S05\_64\_RepA | 0.51 | 0.13 | 0.64 |
| S07\_57\_RepB | 0.65 | 0.01 | 0.58 |
| S07\_Ref1\_RepA | 0.79 | 0.15 | 0.56 |
| S07\_Ref2\_RepA | 0.76 | 0.12 | 0.60 |
| S07\_Ref2\_RepB | 0.77 | 0.13 | 0.59 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Rf-wrong predictions**  | IQIMA | IQIMA difference from threshold | IQIRF |
| S01\_50SE\_RepA | 0.33 | 0.31 | 0.66 |
| S05\_50S\_RepA | 0.69 | 0.05 | 0.63 |