



AQUATIC ECO-SYSTEMS



# VAKI BIOMASS DAILY

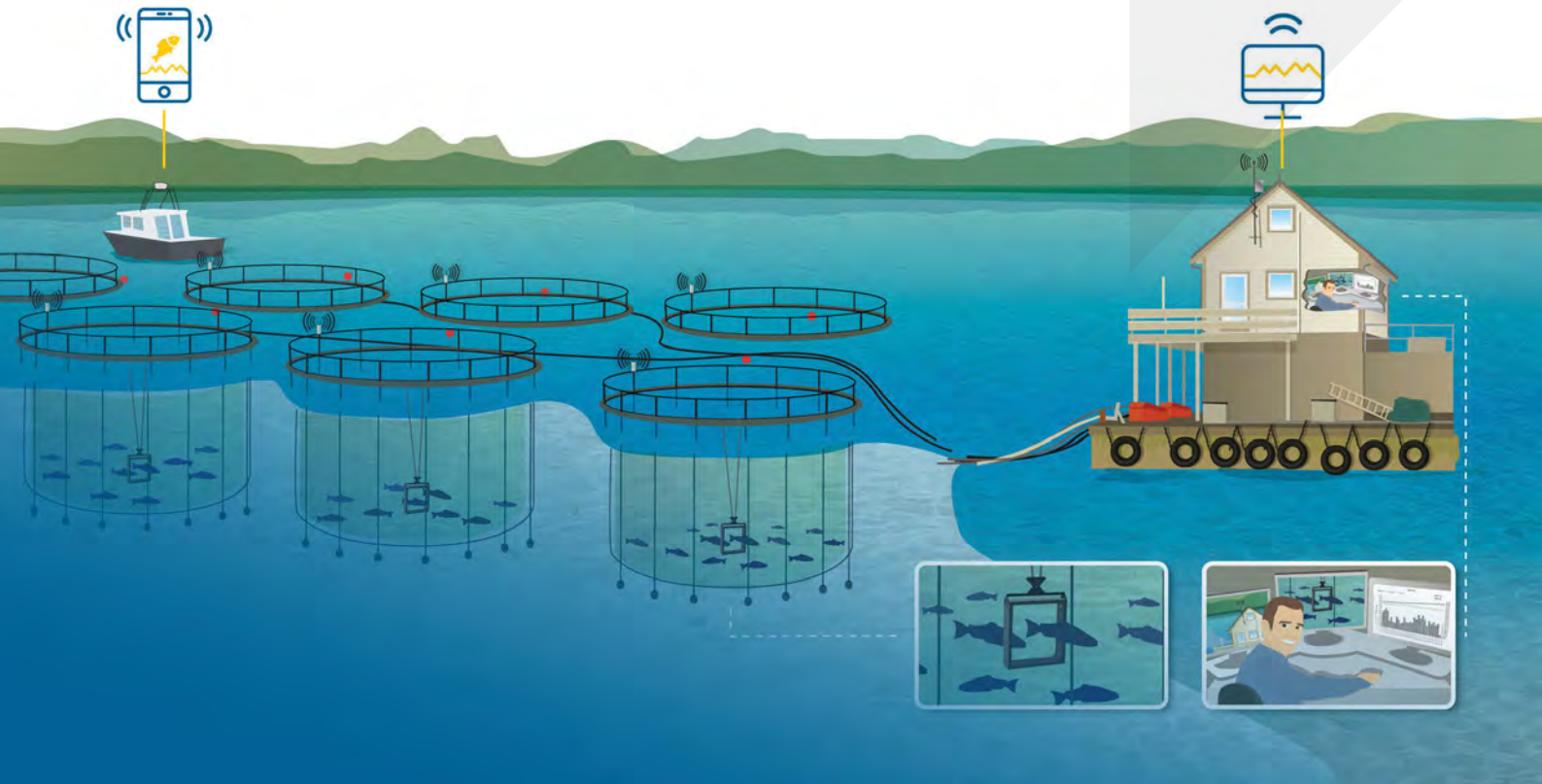
## A REVOLUTION IN BIOMASS MEASUREMENT

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ACCURATE INFORMATION, REAL TIME DATA AND OVERVIEW

# WITH A VAKI FRAME

placed permanently in each cage fish are continually measured with pinpoint accuracy. Data is transmitted wirelessly to the shore base or feed barge. For every site and every cage the daily overview of average weight, size distribution, condition-factor and fish growth is available 24hrs.



## MAIN POINTS ABOUT BIOMASS DAILY

- Total overview of all cages
- Daily size measurements from each cage
- Larger samples give more accurate average weight, size distribution and condition factor
- Daily growth over selected time period
- Automatic reporting of data and system status via VAKI based report and e-mail
- Better information—motivation for operators
- Automated sampling, more time for other things
- Real time comparisons between cages and sites

## ACCURATE DATA ENSURES OPTIMAL DECISIONS

- Select optimum cages and dates for harvest
- Planning for the highest sales price for each time
- Appropriate delivery, better customer relations
- Lower feed conversion ratio with better utilization of feed
- Changes in the growth patterns detected as soon as they occur
- Optimise grading and splitting
- Accurate reports for authority inventory management



# BIOMASS DAILY SOFTWARE GIVES YOU CONTROL

## VAKI BIOMASS DAILY SOFTWARE

Provides powerful analytics:

- Reporting accurate weight and size distribution to harvest
- Lower overall FCR with focus on periodic FCR
- Monitoring growth, comparing to environmental factors
- Controlling production with regard to Maximum Biomass Allowance
- Correcting growth models with data on real growth
- Decisions on grading or splitting
- Correct insurance value and for internal reporting



## THE GROWTH TREND

Daily measurements for thousands of fish are accrued over extended periods.

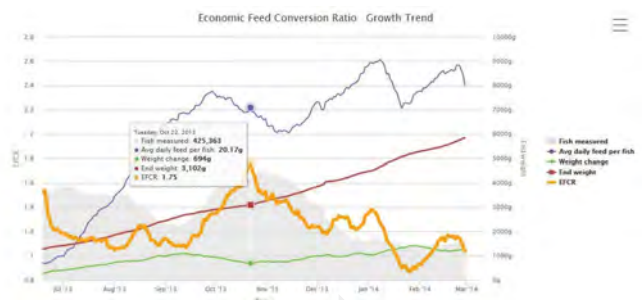
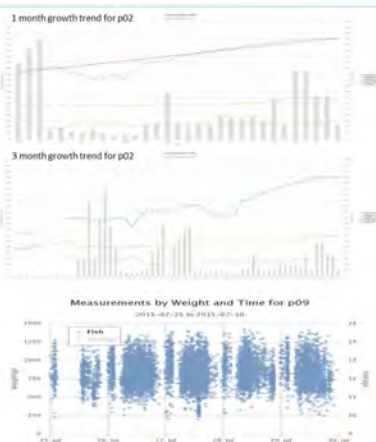
Biomass Daily measures and records fish stock growth data continuously for extended periods of time making it possible to identify trends and establish a growth curve. Insights that can assist with the optimization of growth and feed conversion through the correlation of data such as water temperature, feeding and other impacting factors.

### Biomass Daily – Monthly Report

Period: December 2015

Company name - site

|              |       |               |      |              |      |
|--------------|-------|---------------|------|--------------|------|
| Population:  | p02   | Start Weight: | 849  | End Weight:  | 1330 |
| Avg. CF:     | 1.11  | Start CF:     | 1.14 | End CF:      | 1.15 |
| Avg. No/day: | 2391  | Low no/day:   | 0    | High no/day: | 7085 |
| Avg. Temp:   | 0.00  | SGR:          | 0.61 |              |      |
| Comments:    | 11/12 |               |      |              |      |



Through utilization of Biomass Daily, highly-accurate feed conversion data can be measured and interpreted.

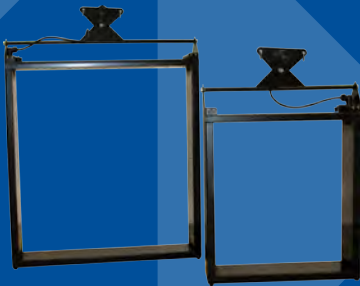
This automatic report shows the status in the cage for every month.

Good overview on growth for the last 30 and 90 days and the behaviour pattern the last 7 days.

## CONTINUOUS MEASUREMENTS NIGHT AND DAY

Fish behaviour is affected by many variables like temperature, oxygen level, light and feeding to name only a few. Being able to sample 24/7 regardless of visibility or time of day, ensures that the measured fish are a good mix from the whole population in the pen.

With continuous measurements over longer periods it is possible to even out any sampling errors that may occur. So continuous measurements over longer time will always give the best result.



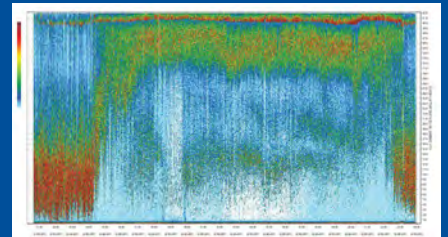
## TWO SIZES OF BIOMASS DAILY FRAMES

VAKI has developed a larger version of the Biomass Daily frame, which catches more fish. These frames are optimal for those cages that have low density or some other reasons for getting few fish through the frames. The accuracy is the same and it can be used with the same sending box and software as the standard version.

## SONAR A TOOL FOR OPTIMAL POSITIONING OF THE BIOMASS DAILY FRAMES

VAKI has developed a Sonar System, which is a helpful tool to locate the bulk of the salmon in large sea cages.

With a full overview of how temperature, light, feeding and other factors affect the fish's swimming behavior, one can find the optimal fit to the frame for best measurement.



### AQUATIC ECO-SYSTEMS

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