


- Fangstjournalen: Denmark's experience using an IT catch reporting tool

09.45 📶 🔋

X Add catch Save

Species	Sea-Trout
Count	1 - +
Taken home	<input checked="" type="checkbox"/>
Length	50 cm
Weight	kg
 What a nice Fish	
Who may see my catch?	Normal
Catch time	09:17
Bait	Spoon



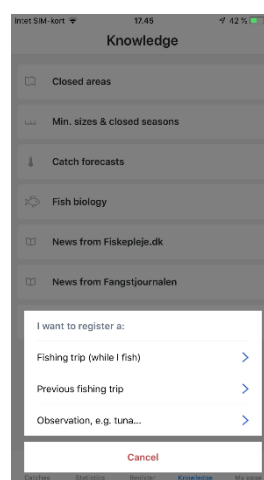
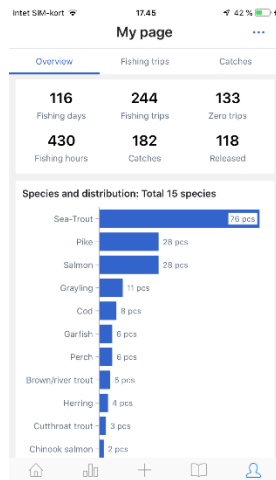
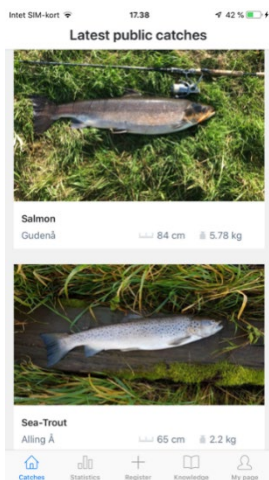
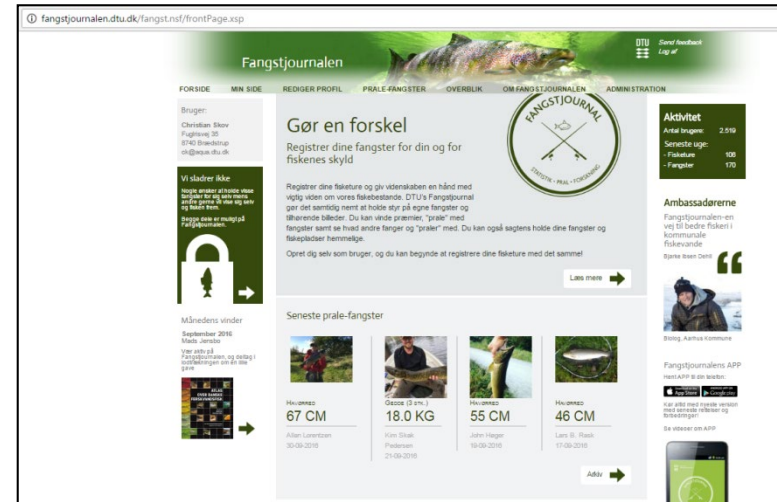
Christian Skov, Associate Professor

Technical University of Denmark, DTU Aqua, Section of Freshwater Fisheries and Ecology

Danish national electronic angling log book, "Fangstjournalen"

Citizen Science project targeting Danish reel and rod anglers (streams, lakes, coastal and sea)

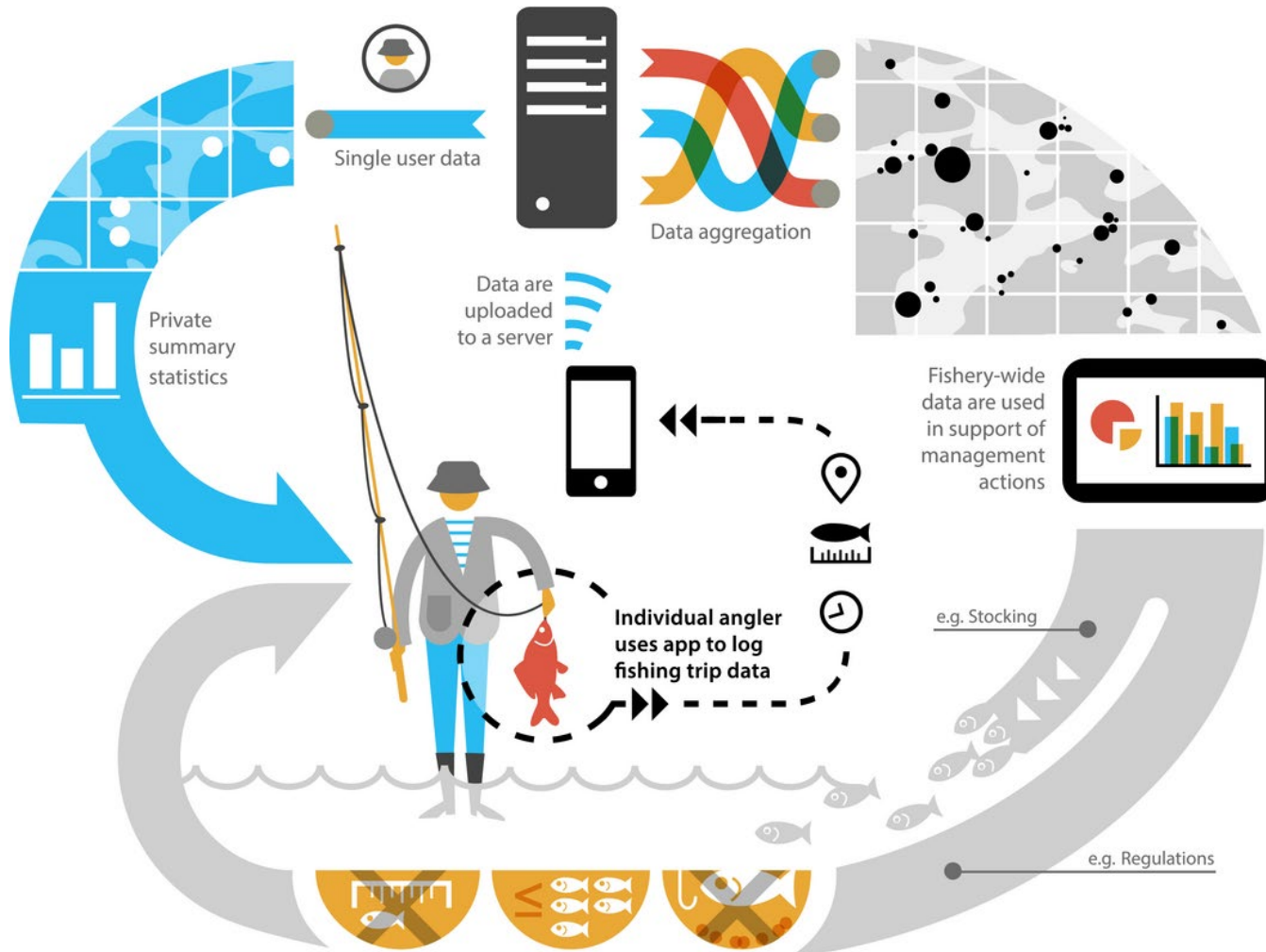
- Developed by DTU Aqua with support from ministries and angling associations
- Smartphone app and computer platform
- NOT mandatory and NOT only catch...but trips



Info

- First version launched in 2016
- Second version in 2020
- Currently 13,000 participants
- ~50,000 Fishing trips reported

The concept behind and data flow



Venturelli, Hyder & Skov
Fish and Fisheries

Angler apps as a source of recreational fisheries data: opportunities, challenges and proposed standards

26 SEP 2016 DOI: 10.1111/faf.12189

<http://onlinelibrary.wiley.com/doi/10.1111/faf.12189/full#faf12189-fig-0001>

What data is collected?

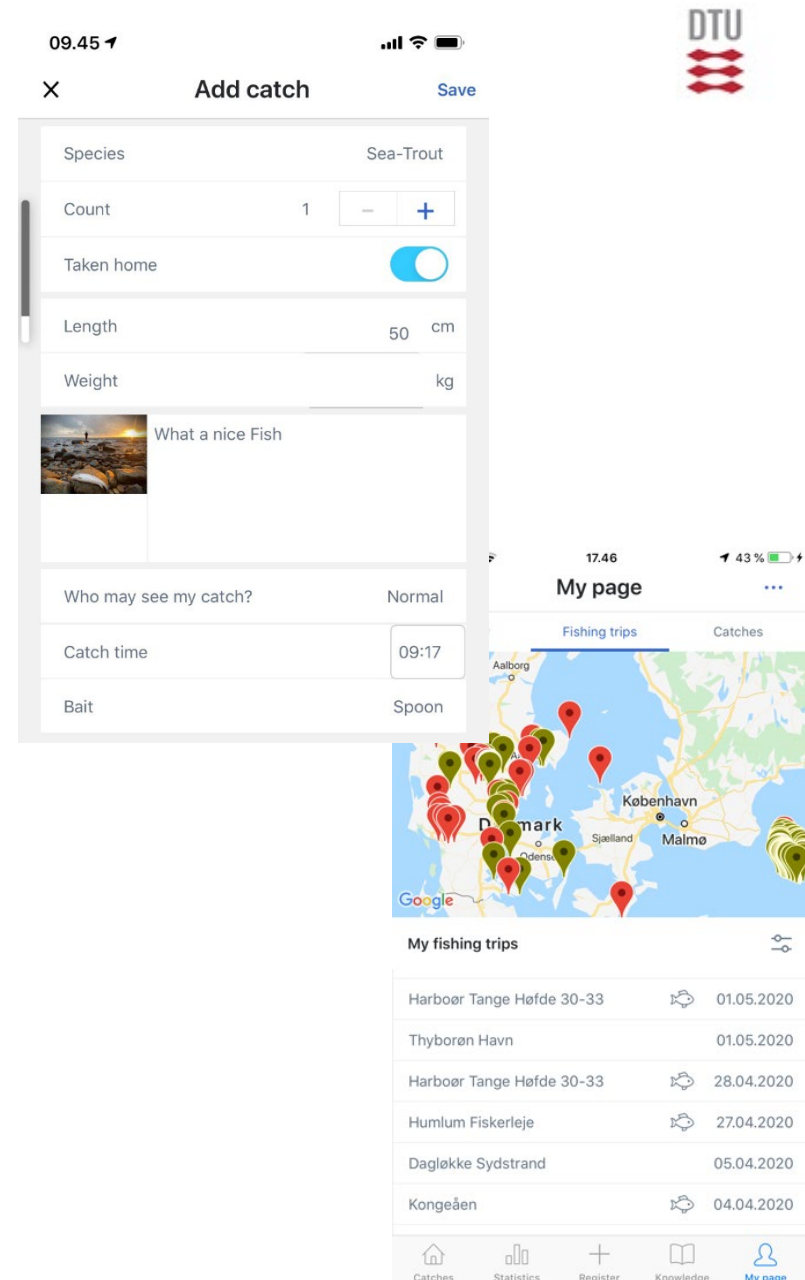
Mandatory information pr trip: *species, length/weight, number, target species and time effort*

...but more data can be registered...if the user desires

...and researchers can easily add additional entry fields e.g., for certain species and in certain areas

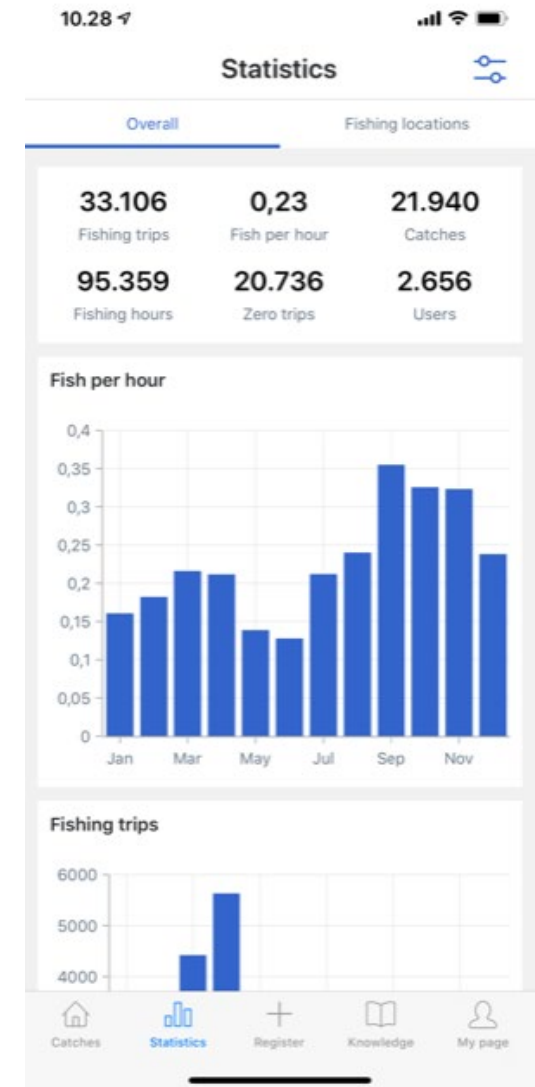
Geolocation is automatically registered

NOTE: Anglers report fishing trip regardless of any catch...and we can therefore track CPUE



How we motivate for participation

- Easy-to-use personal journal for fishing trips, their photos etc.
- Reported catches can be more or less public (from secret to facebook)
- Maps that shows own fishing trips, catch positions and more
- Anglers can explore statistics from collected data
- Facebook page that present data summaries...so anglers can see that data are being used



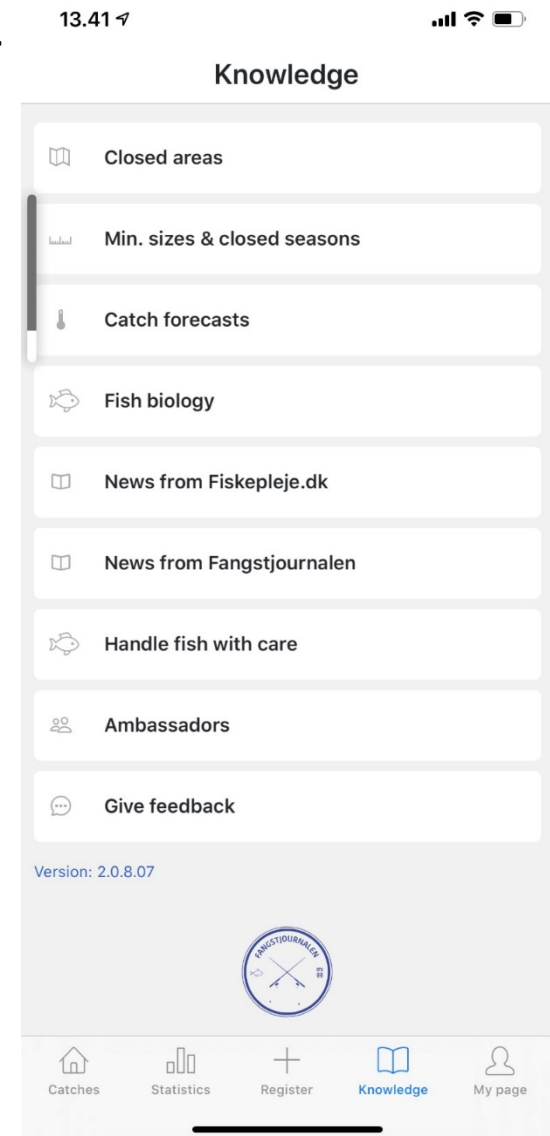
How we motivate for participation

We also provide "services" that helps the anglers.

- Weather information
- "In app" easy access to information and knowledge
- GPS mediated on-site Information about fisheries regulations



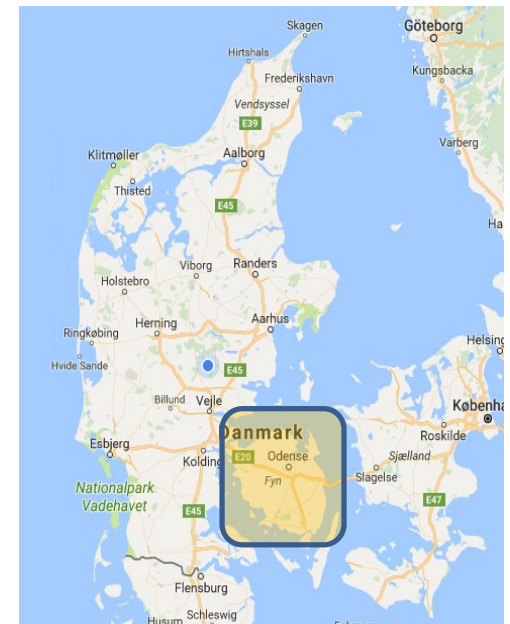
Facilitate compliance with regulations



Data evaluation is central

Example: coastal sea trout fishing:

Data from electronic platform evaluated against three classic methods
1) aerial survey, 2) creel survey and 3) recall survey methods



Data evaluation is central

Example: coastal sea trout fishing:

Data from electronic platform evaluated against three classic methods
1) aerial survey, 2) creel survey and 3) recall survey methods

Main results:

No significant differences in *CPUE, size distribution, release rates and trip effort*

Differences in some demography variables (*sex, nationality*), but no difference in age

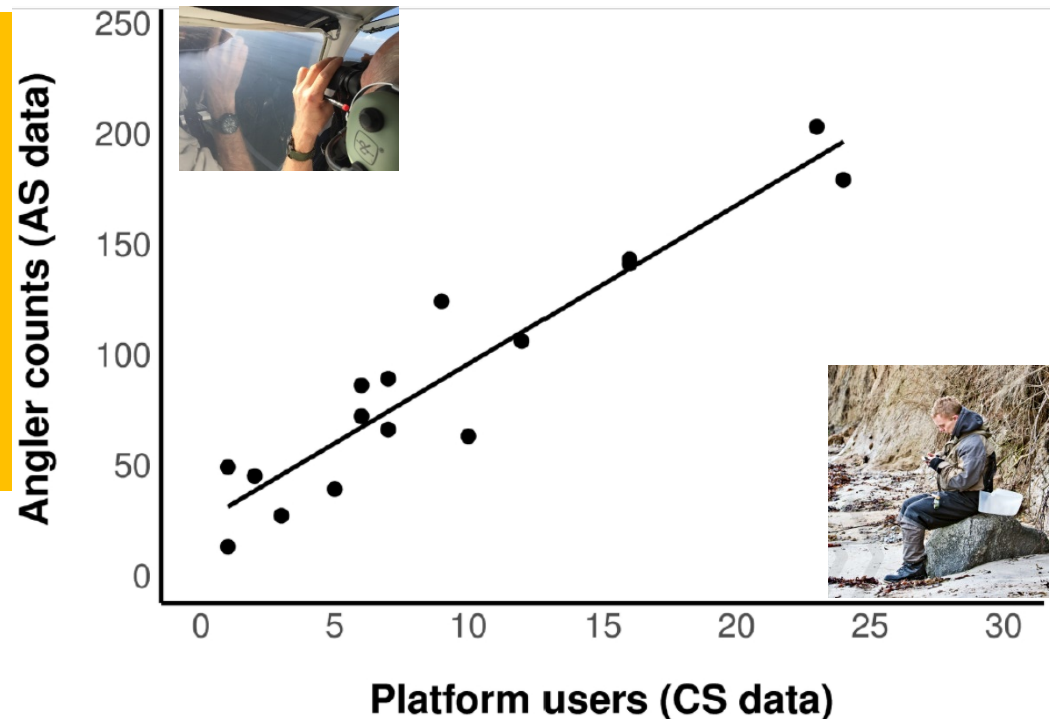
Data evaluation is central

Example: coastal sea trout fishing:

Data from electronic platform evaluated against three classic methods
1) aerial survey, 2) creel survey and 3) recall survey methods

Main results:

Effort measured by app predict overall effort



My thoughts about electronic log books as a future tool

A lot of opportunities

- Suitable for collecting fisheries data e.g., CPUE and length data...if fishers are motivated to do so
- In some fisheries, data quality seems good, despite that users are not fully representative of total angler population
- Collected data can support evaluations of bag-limits and other regulations
- Communication about regulations to fishers through app, aid to prevent unintentional illegal fishing
- May be used for control.... but no experience gained from this project
- Wide-spread and growing use of smartphones increase the number of potential users

My thoughts about electronic log books as a future tool

Challenges

Data quality (More research needed!!)

- *There is a strong need for evaluating the data quality in various fisheries*

App development and maintenance

- *Design is crucial!*
- *Cultural differences may affect our ability to build a "one-fits-all" solution*
- *It is costly to keep an app updated!*
- *Life time of an app may be a limited number of years*

Citizen science

- *Constant effort* *is needed to attract, retain and potentially re-engage participants*

My take home messages!

- **Electronic platforms has huge potential as a data collection tool: abundance, size distributions, angler behaviour (e.g. C&R rates) and more.**
- **BUT It takes a lot of effort to develop, maintain and support an updated electronic platform...and not least to keep users motivated to engage**
- **More research is needed:**
 - ❖ **If and when can electronic platform data stand alone?**
 - ❖ **Spatial and temporal stability of data quality?**
 - ❖ **Fisheries depended variations in data quality?**

Thank you for your attention

Thanks to funding bodies

-Danish National Angling Funds

-Tips & Lotto funds

-EMFF project: "Improving the basis for managing recreational fish stocks" (2016-2018).

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Insights into the users of a citizen science platform for collecting recreational fisheries data

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Evaluation of a citizen science platform for collecting fisheries data from coastal sea trout anglers

Journal: *Canadian Journal of Fisheries and Aquatic Sciences*

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