



Swedish Civil
Contingencies
Agency

Floods Directive Implementation in Sweden

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Life Primes – National Networking Meeting,
Bologna Italy
June 18th 2018

Göta älv river valley

Tuve 1977



- Tuve 1977
- Quick clay
- 9 fatalities
- ~ 65 houses



Piteå 1997



Vårflod i Falun 1995.

Foto: Kjell Jansson

Falun 1995

Natural Hazards and Disaster Events – in Sweden today

Windstorms – heavy winter storms - hurricanes

- Gudrun 2005, Per 2007, 2017

Flash floods and inundations

- Fulufjäll 1997, Hagfors 2004, Ånn 2006 and South west of SE 2014, 2015
- Arvika and Lake Vänern 2000-2001, Lagan 2004, Västra Götaland 2006-2007, 2011, Springflood 2018

Landslides

- Göta älv/Tuve 1977
- Vagnhärad 1998
- Road E6 Munkedal 2006

Forest fires

- Boden 2006
- Härjedalen 2008
- Västmanland 2014
- Värmland, Västmanland 2018

Snowstorms

- Gävle 1998



New Consequences – CC and change in land-use



Same place –
new
consequences

- View from Rudsberget
1916 och 2007



By courtesy
City of
Karlstad

EU Floods Directive, 2007/60/EC

6.11.2007

EN

Official Journal of the European Union

L 288/27

DIRECTIVES

DIRECTIVE 2007/60/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 23 October 2007
on the assessment and management of flood risks
(Text with EEA relevance)

Closely linked to The Water Framework Directive
2000/60/EC

22.12.2000

EN

Official Journal of the European Communities

L 327/1

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(Acts whose publication is obligatory)

DIRECTIVE 2000/60/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 23 October 2000
establishing a framework for Community action in the field of water policy

Process in EU, Common Implementation Strategy

- Working Group Floods
- Strategic Coordination Group (SCG)
- Water Directors (WD)
- Article 21 Committee

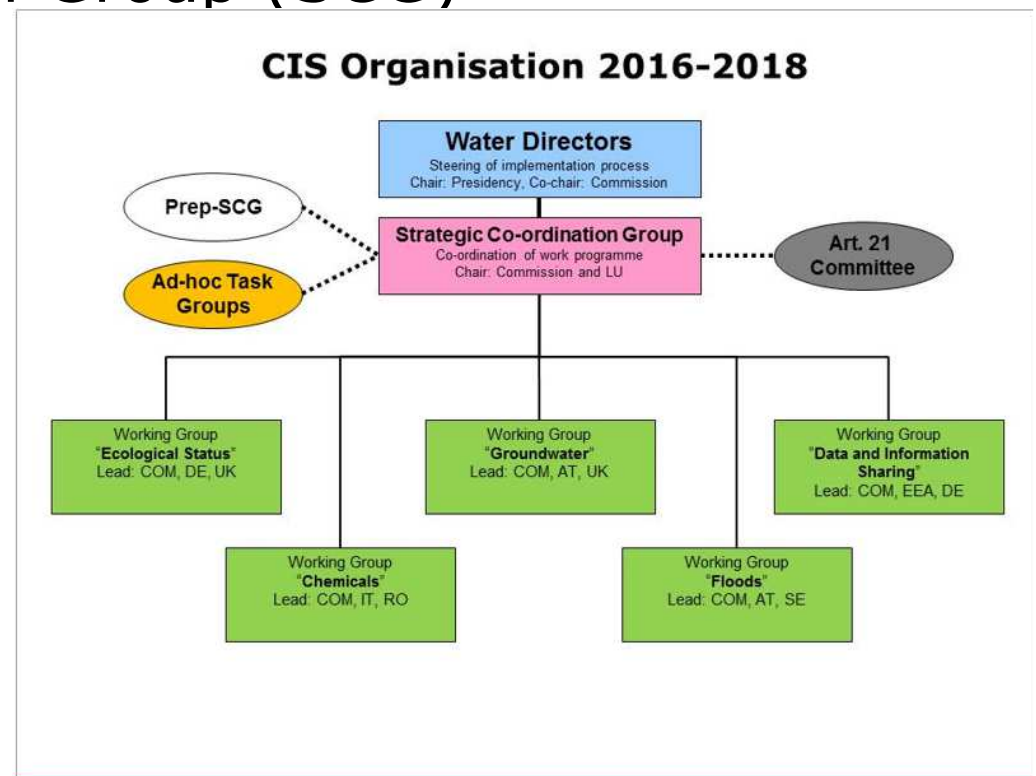
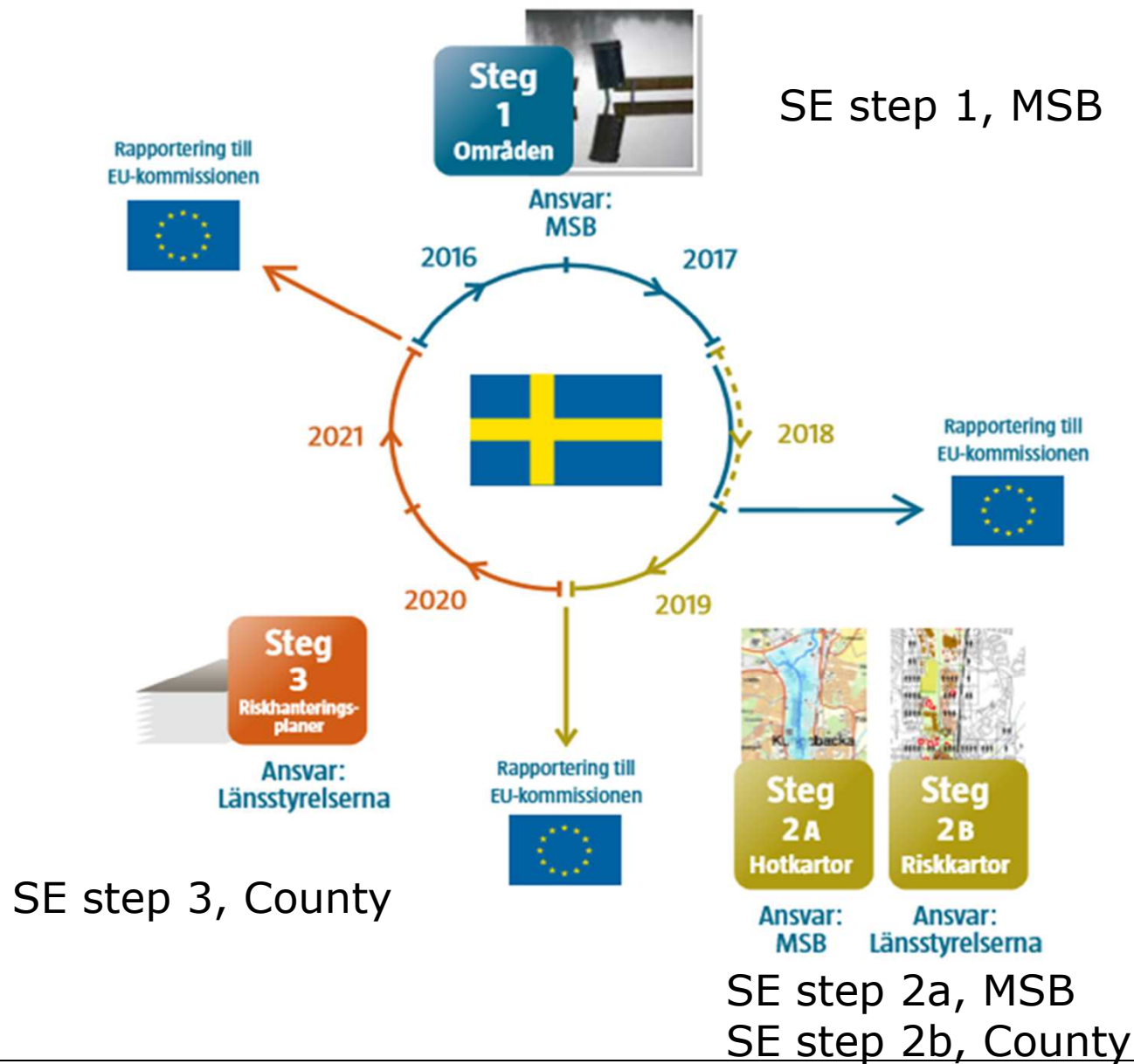


Figure 1: Structure of CIS 2016-2018



Swedish review of step 1, 25 APSFR



- Detailed Flood inundation maps
- Coastal floods, extreme water level
- New definition build up areas
 - Additional historic floods
- 18 APSR from 1st cycle, 10 areas are the same
 - 33 areas in total (cycle 1+cycle 2)

Flood Hazard Maps and Flood Risk Maps

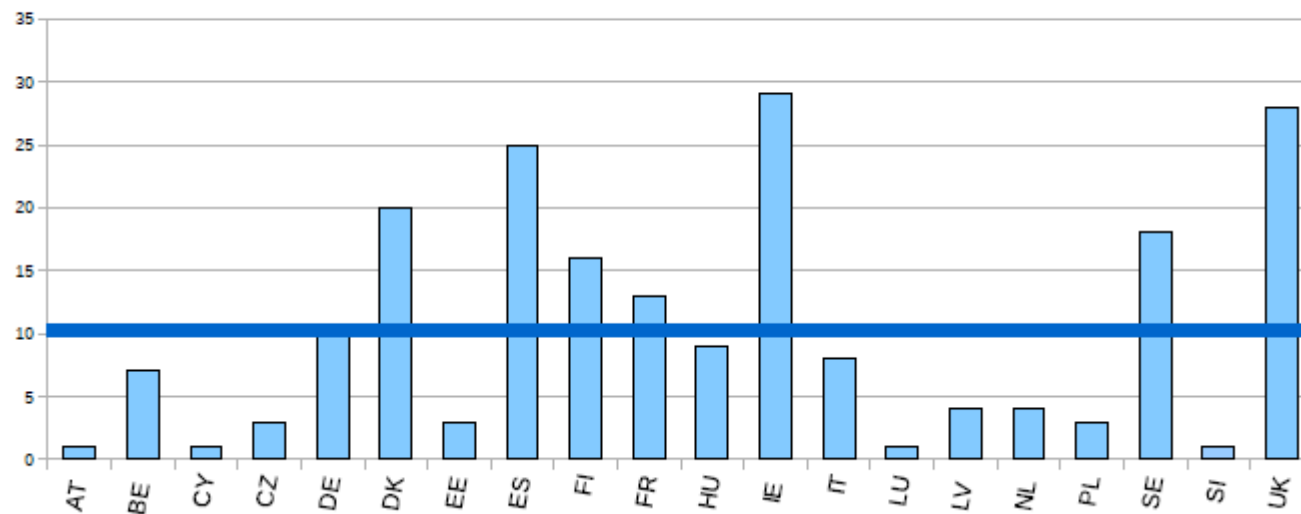
- MSB is producing all Flood Hazard Maps (FHM) during 2018
- MSB to review the guidance on how to produce the Flood Risk Maps (FRM)
- Produce revised FRM during 2019
- Build on common information and the same software as in the 1st cycle

Flood Risk Management Plans

- MSB to review of the guidance
- No legal binding measures in the Flood Risk Management Plans (FRMP)
- Structural measures – municipal responsibility
- “Building in water-measure” – must get permission from the Environmental Court
- FRMP in SE on APSFR-level

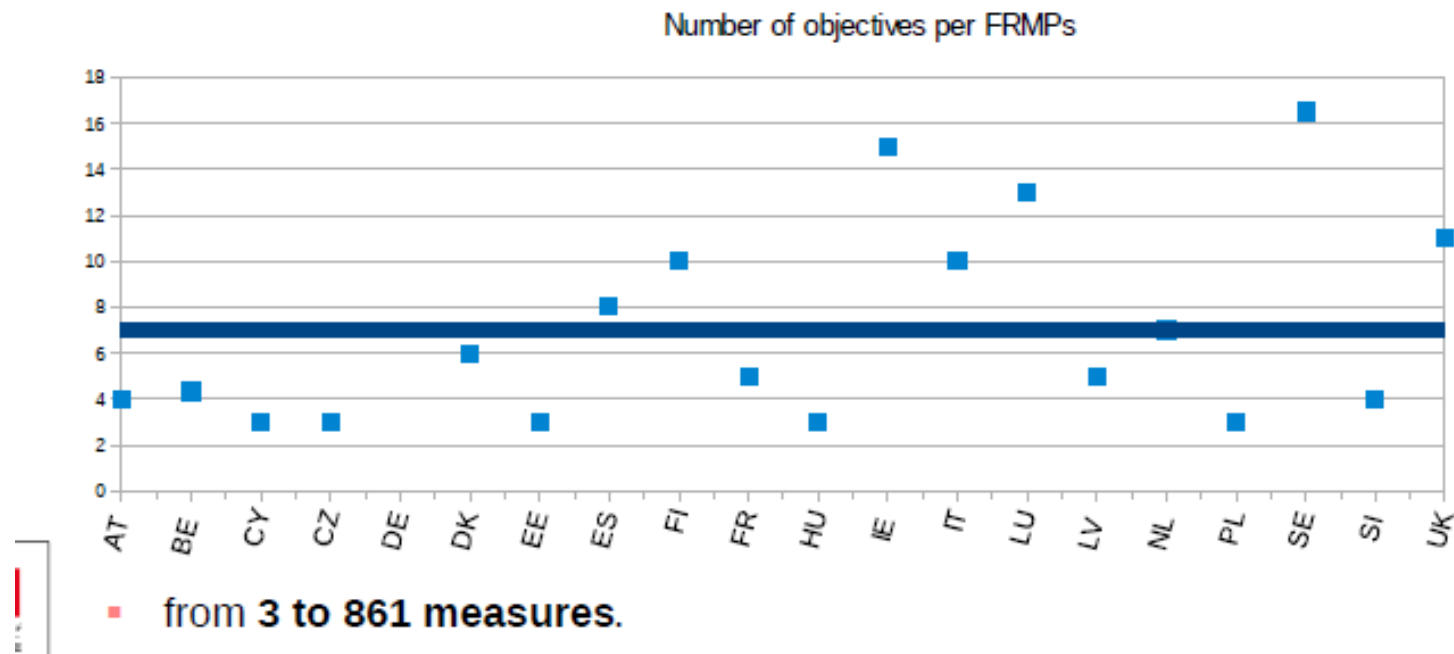
FRMP at EU level

- Number of FRMPs in the Member States (MS)



FRMP at EU level

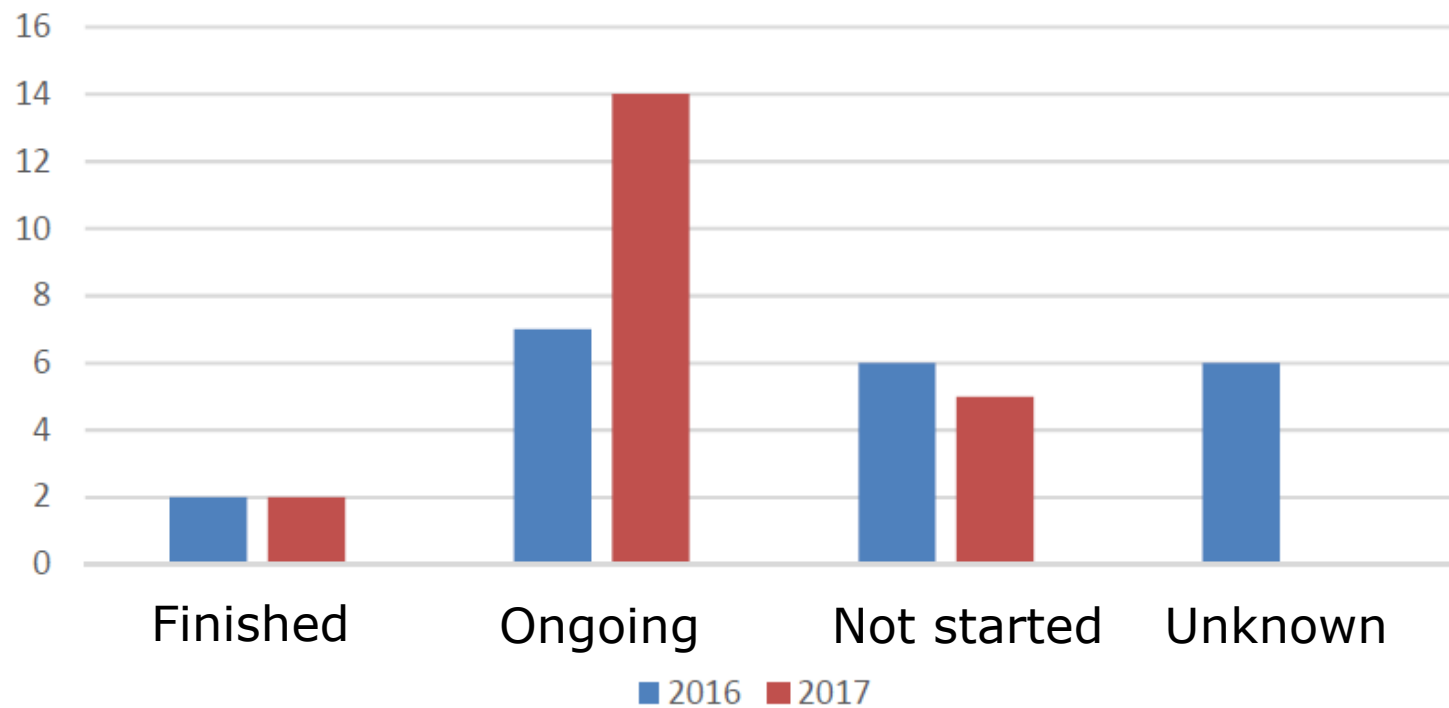
- Details about the FRMPs
 - between **30 and 1 120 pages** without annex (210 pages on average).
 - **7 objectives on average**



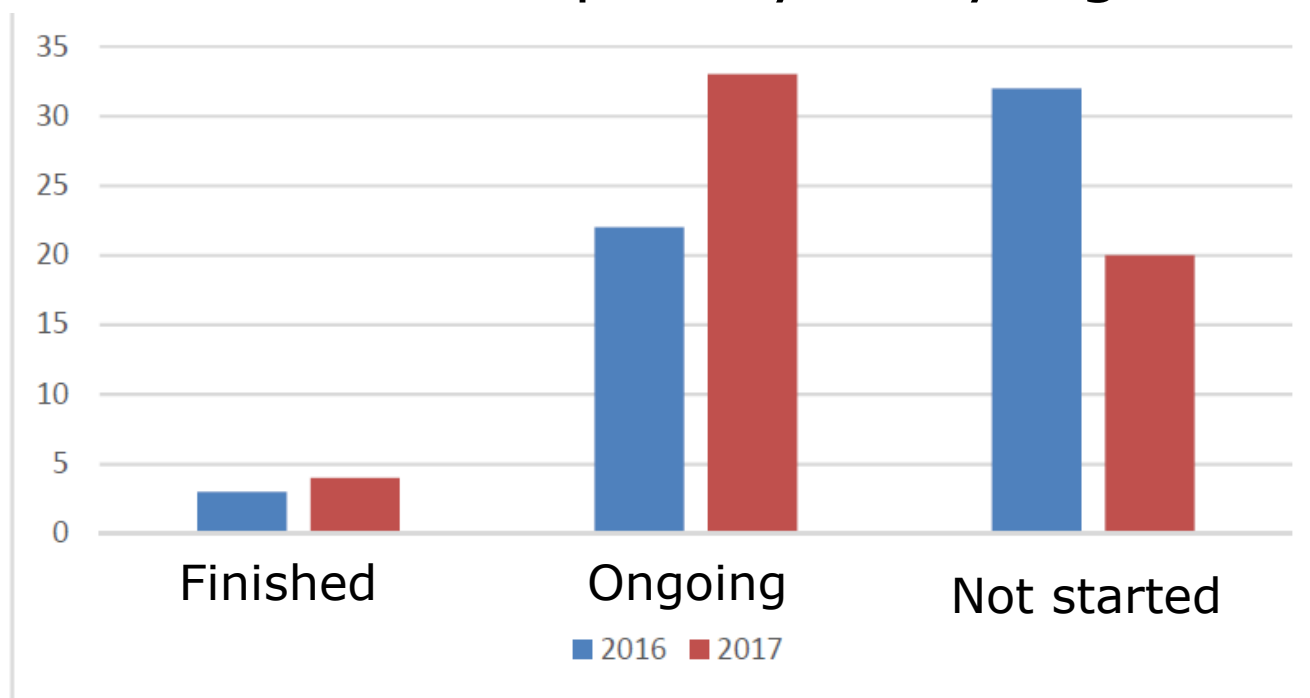
Follow up on measures in 18 FRMPs

Measures finished	43 st
Measures ongoing	117 st
Measures continued	1 st
Measures just started	25 st
Measures not started	108 st
Unknown	13 st
Total	306 st

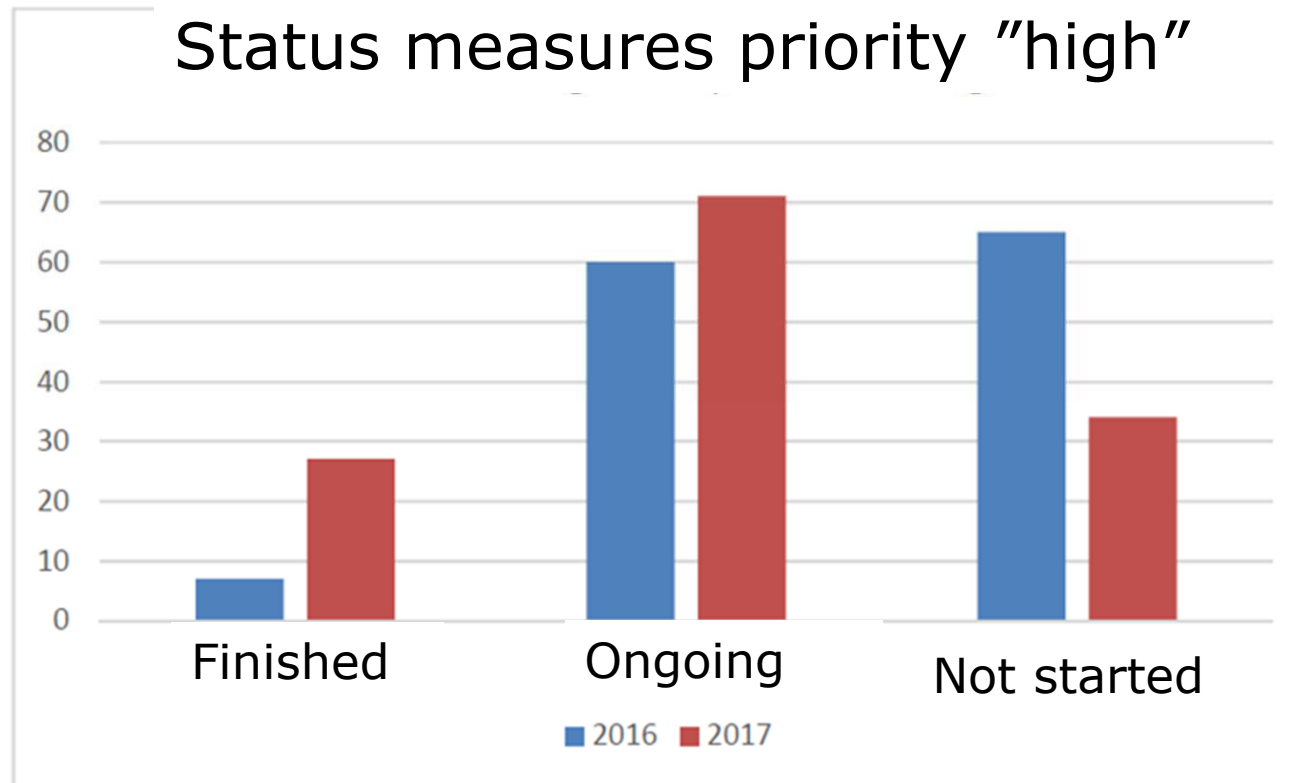
Status measures priority "critic"



Status measures priority "very high"



Status measures priority "high"



Lessons learned from cycle 1

- The overall picture of the flood situation in Sweden confirmed
- Increased quality of the flood inundation maps, more discharges, CC-adaptation for two discharges, high resolution Digital Terrain Model (DTM)
- Very detailed flood hazard maps for the 18 APSFRs
- A systematic approach to mapping and management of flood risks within the Country
- Follow up of the FRMPs at the regional/local work

Development in the 2nd cycle

- Coastal floods
 - investigation of historic events
 - mapping coastal stretches
- Review of the methodology
- Review of the data per objective for the analysis in cycle 2
- Geographic deliniation
- Study on including Critical Infrastructure (CI) and Vital Societal Functions
- Communication

WG F Lessons Learnt Workshop

April 2016

**COMMON IMPLEMENTATION STRATEGY
FOR THE WATER FRAMEWORK DIRECTIVE AND THE
FLOODS DIRECTIVE**



**Flood Risk Management in the EU
and the Floods Directive's
1st Cycle of Implementation (2009-15)**

A questionnaire based report