



Some elements on On-The-Spot Checks (OTSC) and area measurement

DSCG/2014/32 FINAL

MARS (Monitoring Agricultural Resources) Unit
DG Joint Research Centre



Evidence-based scientific and technical support
Cooperation with policy Directorates-General
Sharing its know-how with the Member States

Joint
Research
Centre

www.jrc.ec.europa.eu

Sorry for repeating and rehashing ...



**WHERE HAVE WE
HEARD THESE
WORDS BEFORE?**

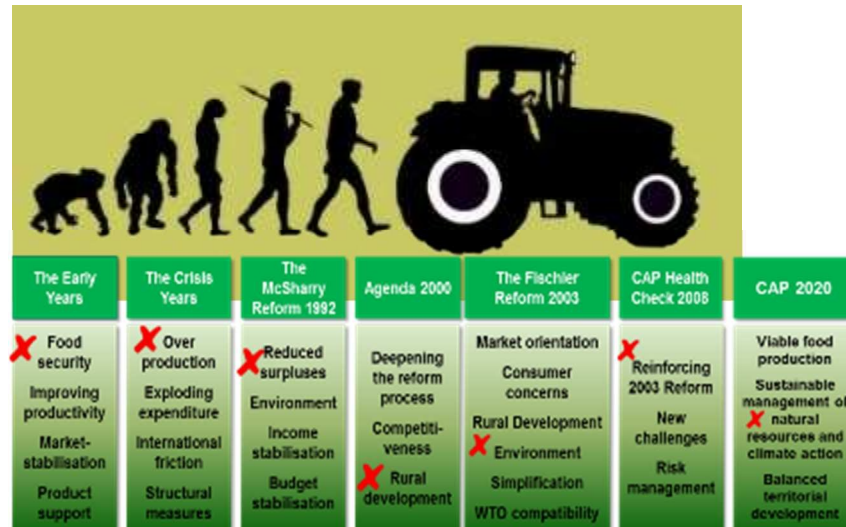
That awkward moment..
When you've already
said "what?" three times
and still have no idea
what the person said,
so you just agree.

On-The-Spot checks

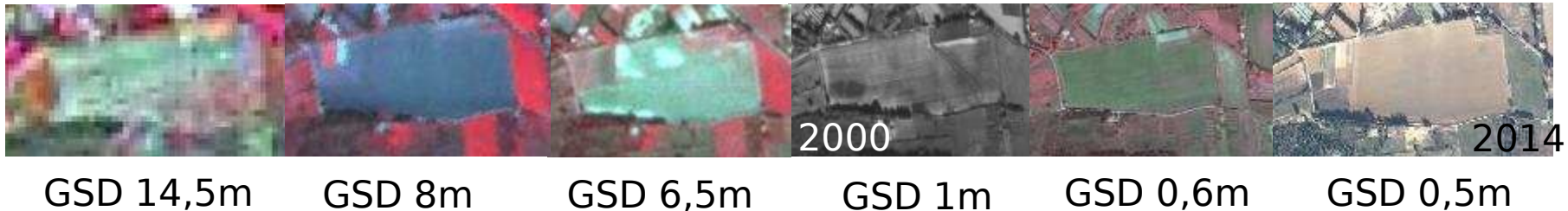


Objectives unchanged: check all conditions for which aid is granted

But conditions constantly evolve



Technology is also evolving



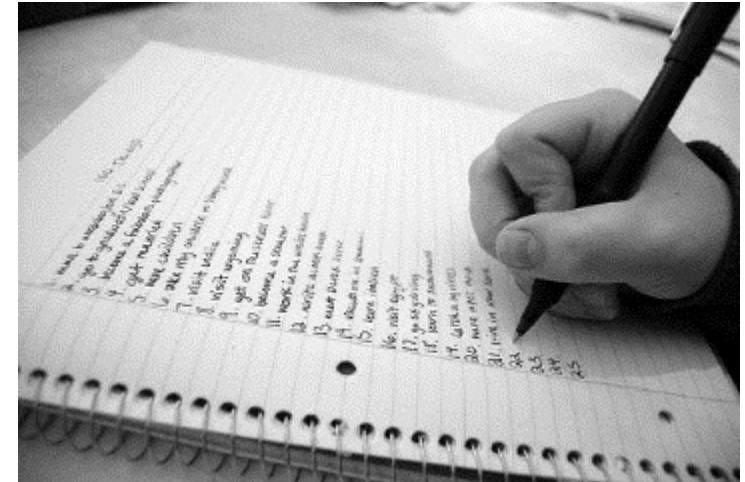
OTS checks methods constantly need update if not upgrade

What to check?



New CAP 'checking list'

- Area
- Lengths
- Different land use / land cover aspects
 - Eligibility of land ('minimum activity')
 - Crop type
 - Voluntary Coupled Support
 - Diversification
 - Permanent grassland
 - 'Exemption thresholds'
 - Landscape feature types
 - Traditional cropping practices
 - GAEC
 - EFA
- Tree counting
- Land maintenance
 - Erosion, land abandonment, hedge-tree removal ...



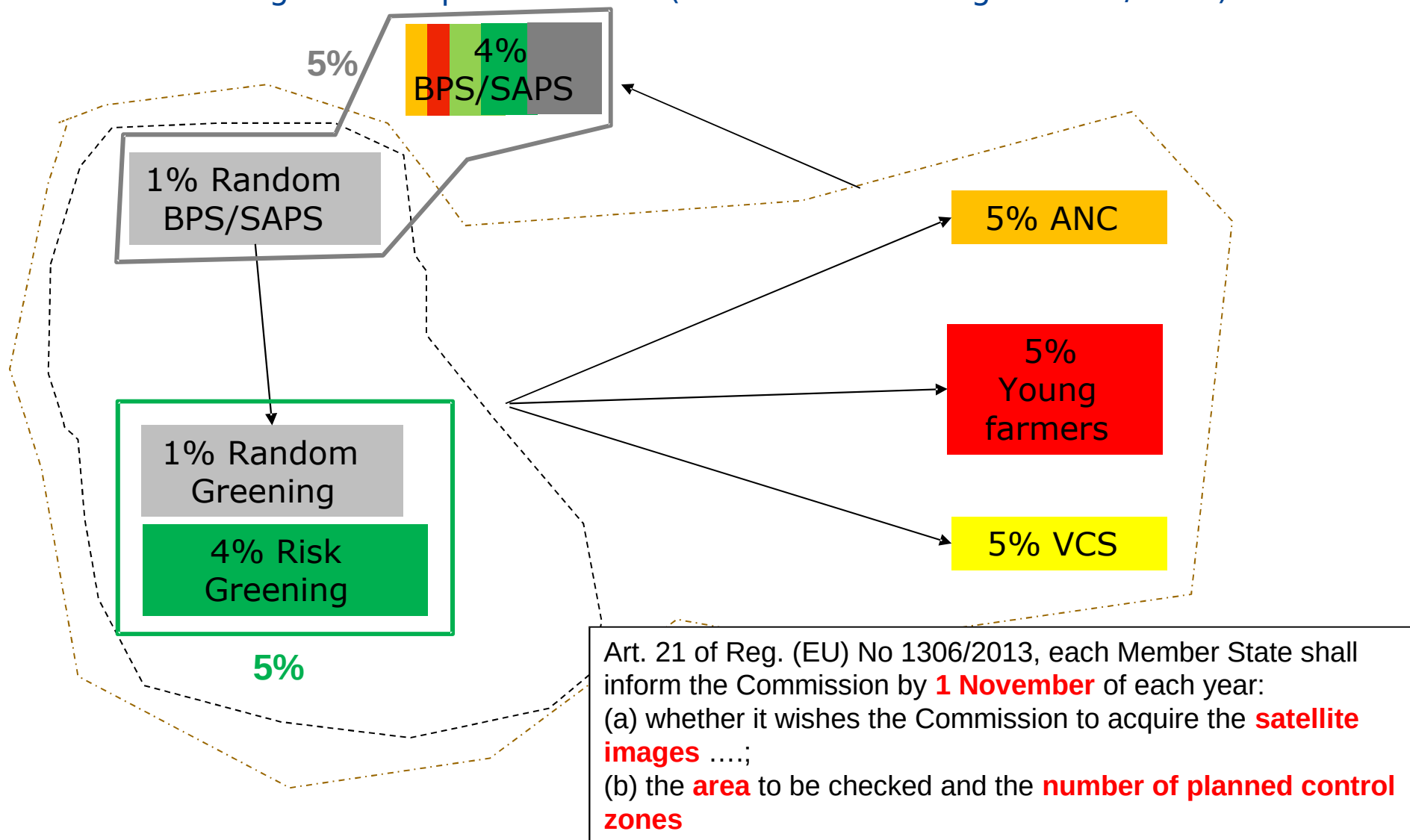
Ensure an exhaustive review and description of elements to check

Topics of the discussion groups

Sample selection



Substantial changes in samples selection (art. 30 to 34 of Reg. EU 809/2014)



Prepare the OTS checks



Prepare the OTS checks



From LPIS QA experience

Essential step of image processing

The ratio of the ortho-image pixel size to the GSD of the raw image is smaller than 1.3

The resampling of the ortho-image is applied correctly (**DEM quality**)

Absence of artifacts caused by the pan-sharpening

Absence of local artifacts caused by the ortho-rectification

Absence of saturation of the histogram and poor bit depth

Absence of artefacts revealed by the mosaicking (geometric discrepancies visible at seam lines; heterogeneous feature condition across tiles)



Band	DN value
Blue	255
Green	310
Red	255

Control site: TORR, Spain
Linear Stretch

Pan-sharpened, Principal Component Method, 16 bit



Band	DN value
Blue	278
Green	370
Red	356

Pan-sharpened, High-Pass Filter Method, 16 bit



Band	DN value
Blue	282
Green	375
Red	352

Pan-sharpened, modified Intensity-Hue-Saturation method, 16 bit

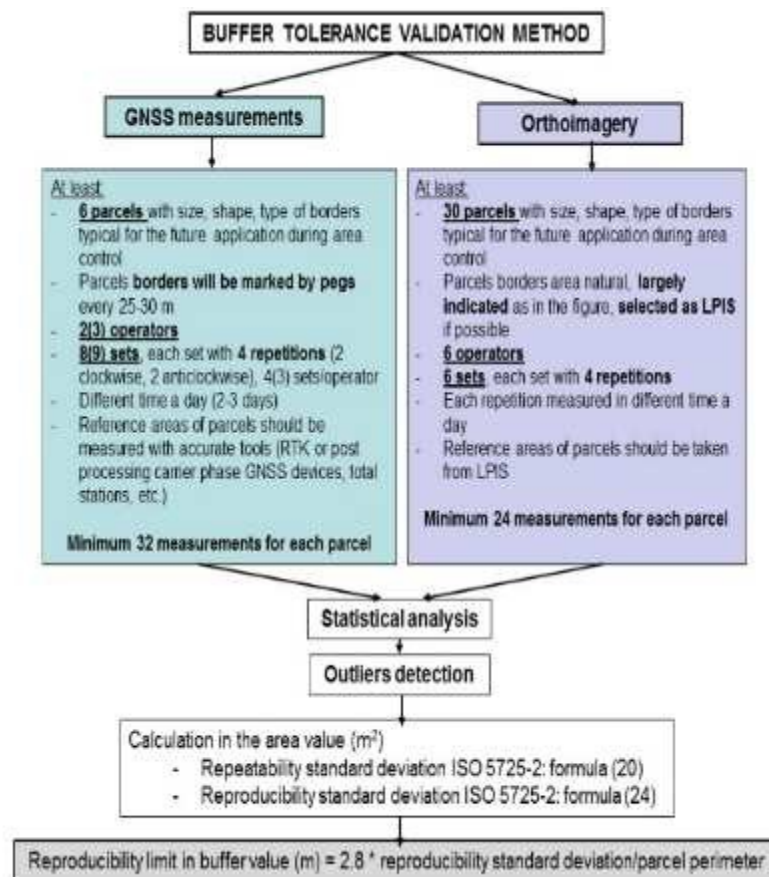


**Move from 1/10.000
to 1/5.000**

Prepare the OTS checks



Validate area measurement tools



Determine the Inherent tool error (accuracy)



To be used in 'real conditions'



Single buffer tolerance value

Prepare the OTS checks



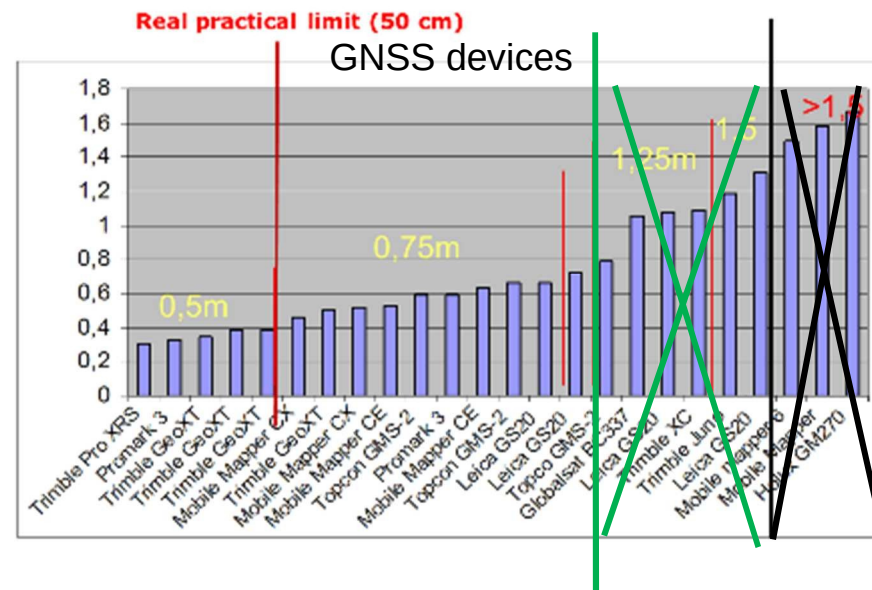
Single buffer tolerance value

Please Note

Only for parcel area measurement in the frame of OTS checks

Up to 2014

- Maximum tolerance 1.5 m
- Use of tolerance value of tool used
- Tools with tolerance up to 1.5 m



From 2015

- Maximum tolerance 1.25 m
- One tolerance for all (single value)
- Tools with tolerance up to 1 m

Ease measurement process

Better acceptance by farmers

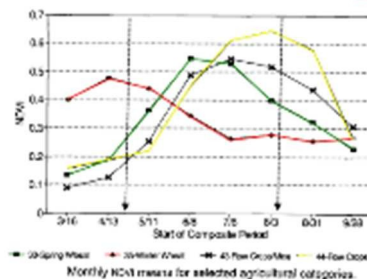
Reflect 'real conditions' of checks

'Only' accurate tools

Prepare the OTS checks



Create image interpretation guidelines
(with field example)



Essential role of clear features' definition

Essential role of definition of common measurement rules



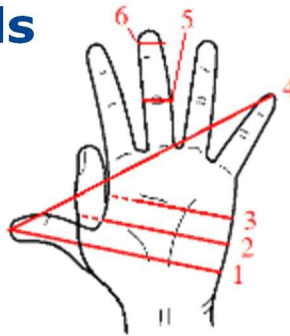
Same area on field and
on image

Top
PRIORITY

Perform checks



Use appropriate tools **Is**



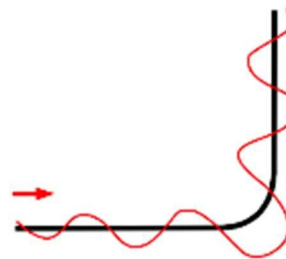
Use tools appropriately



Same conditions, settings as validated

“Stay on the line”

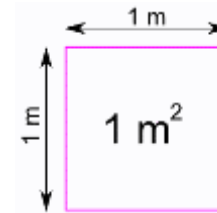
But define your line ...



Perform checks



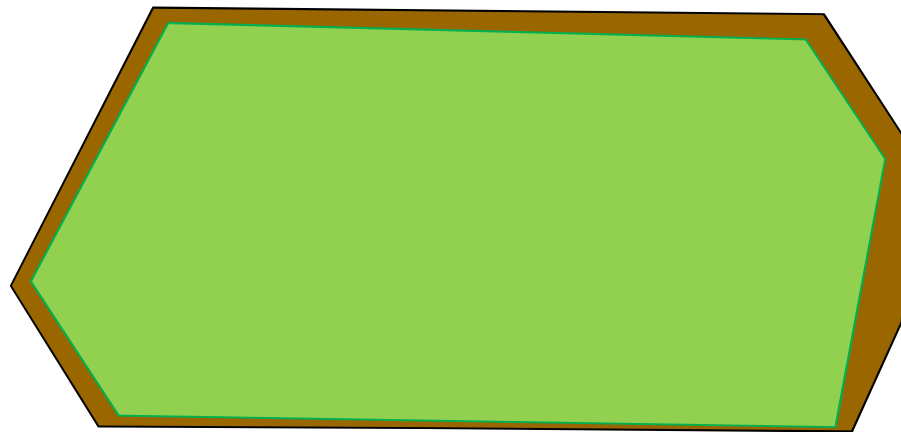
- Use common rules
diagnosis CwRS and diagnosis field should be identical
- Measurements **only if needed**
- Use of **Single buffer Tolerance**
- Possibility to limit to **50% of parcels**
Results **extended to 100%**
- Have imagery on field
- Ensure good timing of RFV
- Have digital OTSC manual on field (with examples)



Please
Note

Specificities of the Greening payment

The OTSC will determine the area of each crop based on the **cropped areas' limits** that are visible in the field (the crop itself or the crop residues) or on the imagery used in CwRS



Produce OTS check REPORT

**"In God we trust.
All others must
bring data".**

W. Edwards Deming



Document (justify) and record every diagnosis

Who, when, where

Measurement conditions (N.B.: same as validation)

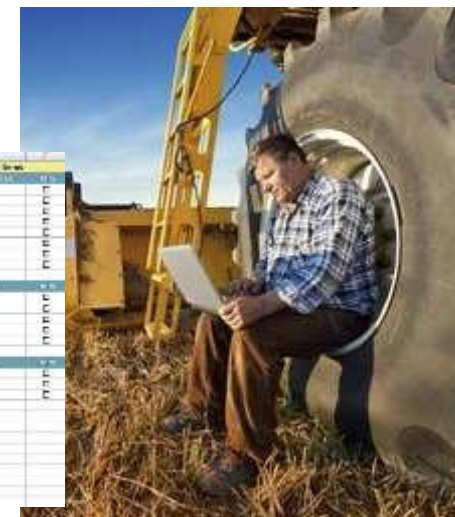
Take pictures

Digital format reporting

Scrolling menu, check list

Common between CwRS and Field check

(N.B. Mutual training field and screen)

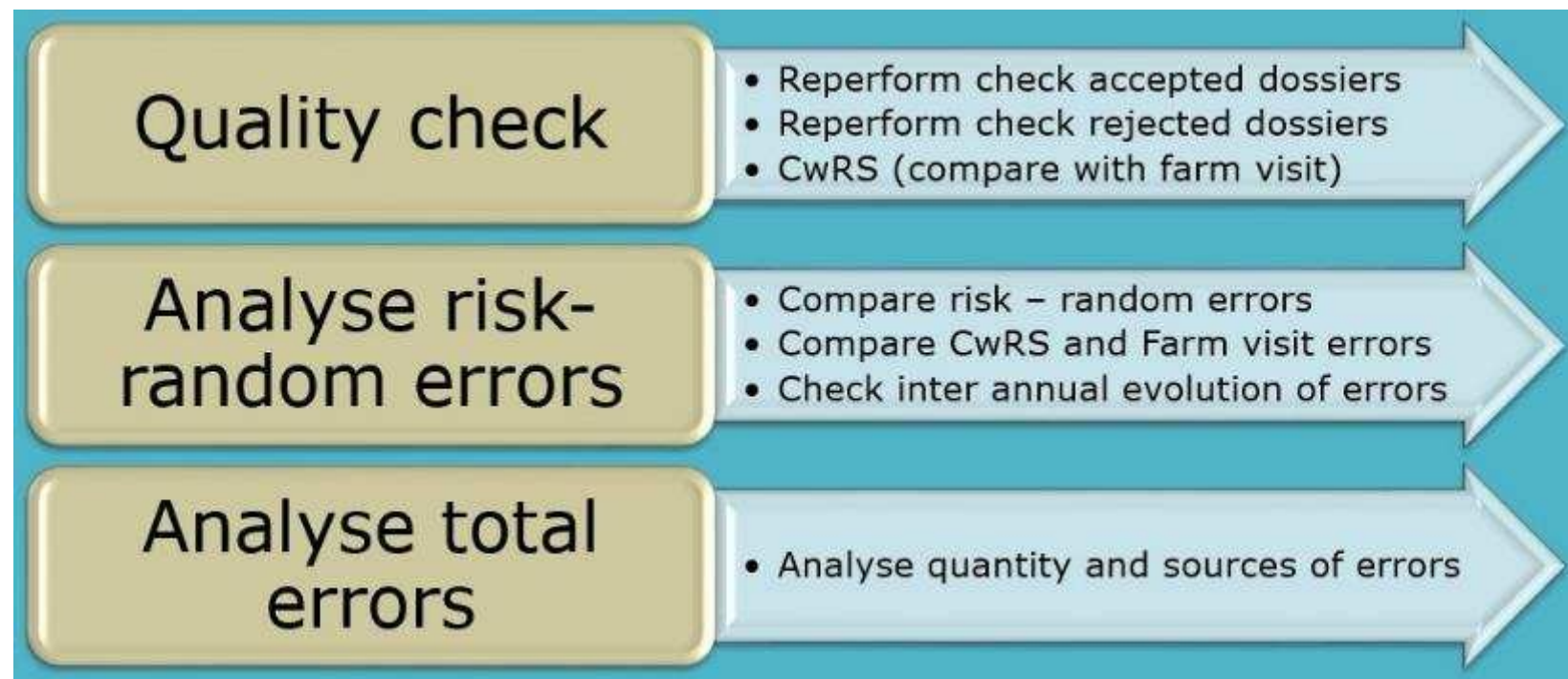


Have a reporting section dedicated to follow-up

LPIS, EFA layers needs for verification



Check and Analysis of OTS checks results



See presentation on 'Quality Management'

Need for support ?



Need for new tools?

Use of RPAS as support to OTSC checks?

Pictures used as evidence by farmers?
Or others (sensors from precision farming)?

Method for “OTS Check Quality management”?

Why Who
Disagree Constraint
Advantage
Clarification. Opinion
Question
Agree

Thank you