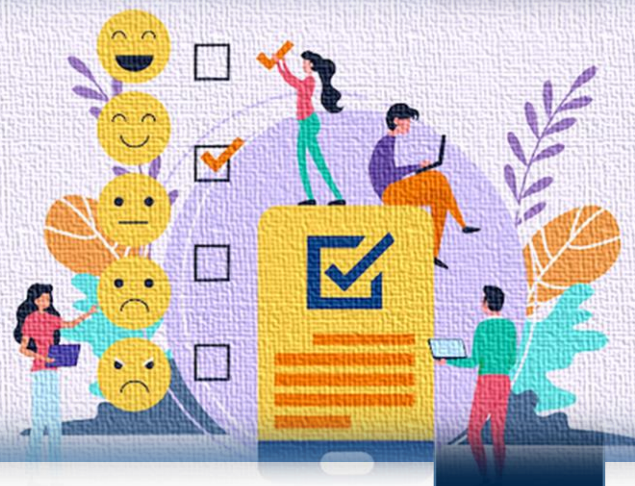
EUMETSAT NWC SAF

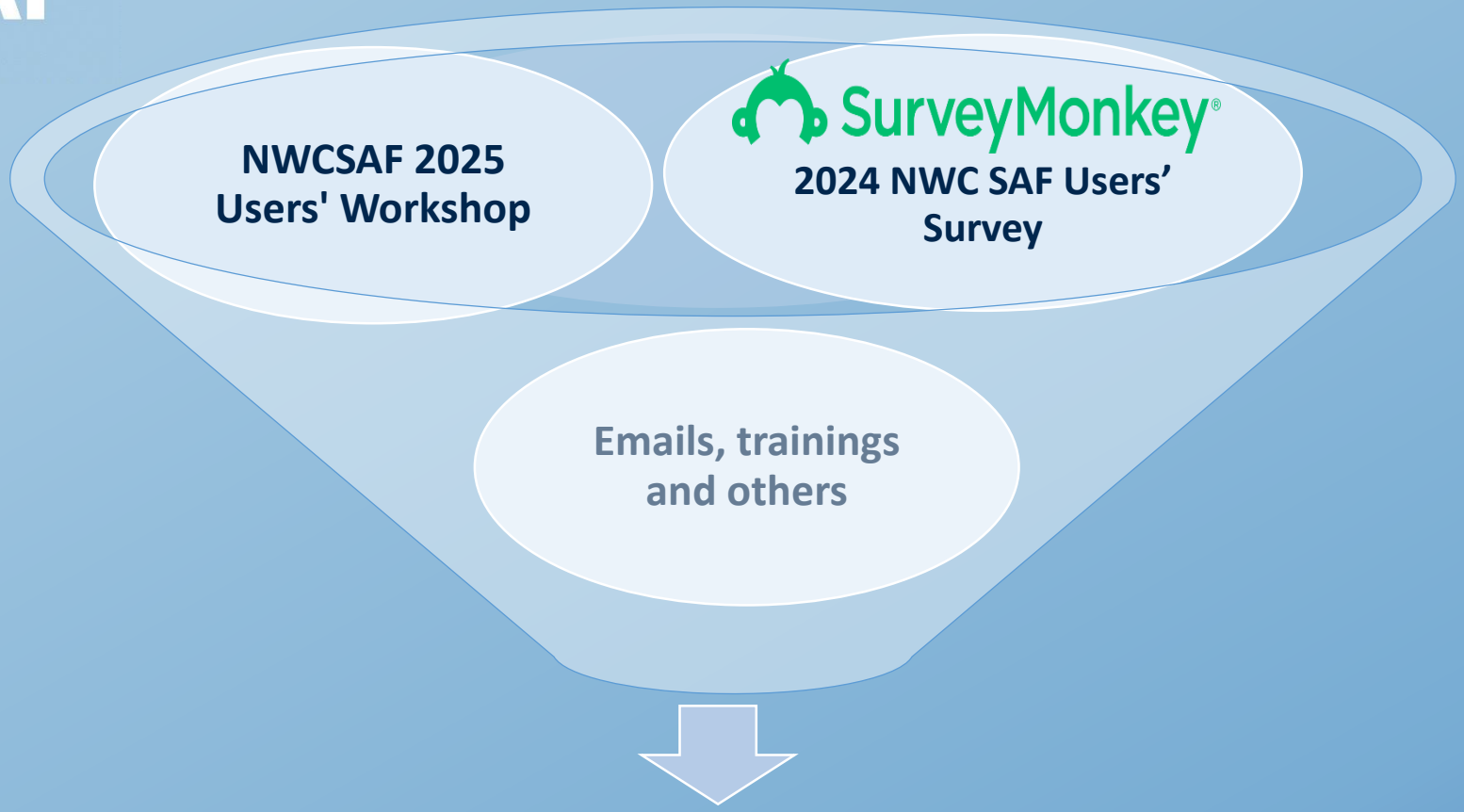
2024 NWC SAF Users' Survey: a way to users to be part in the future of NWC SAF

Irene Bueno Regodón and Pilar Rípodas Agudo

NWC SAF Users' Workshop 2025. 25-27th February
Madrid, AEMET HQ.



AEMet Agencia Estatal de Meteorología · METEO FRANCE · SMHI · GeoSphere Austria · METEO ROMANIA



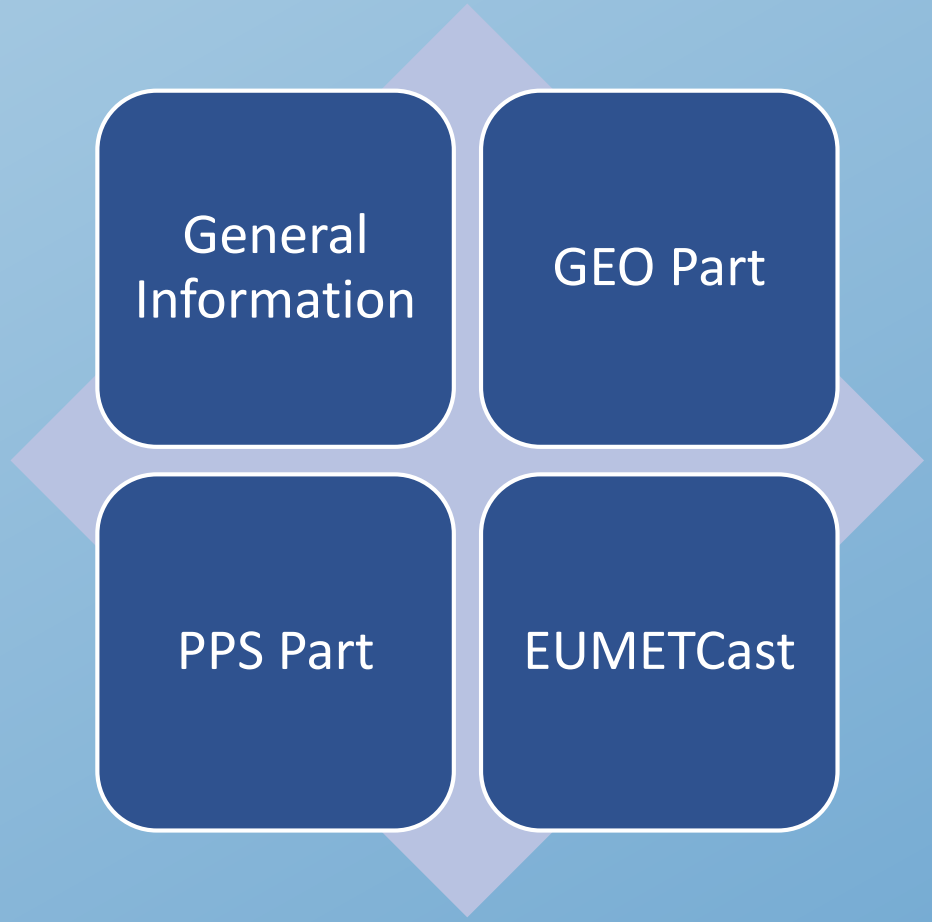
Users' point of view for the current and the following phase

Principal Features

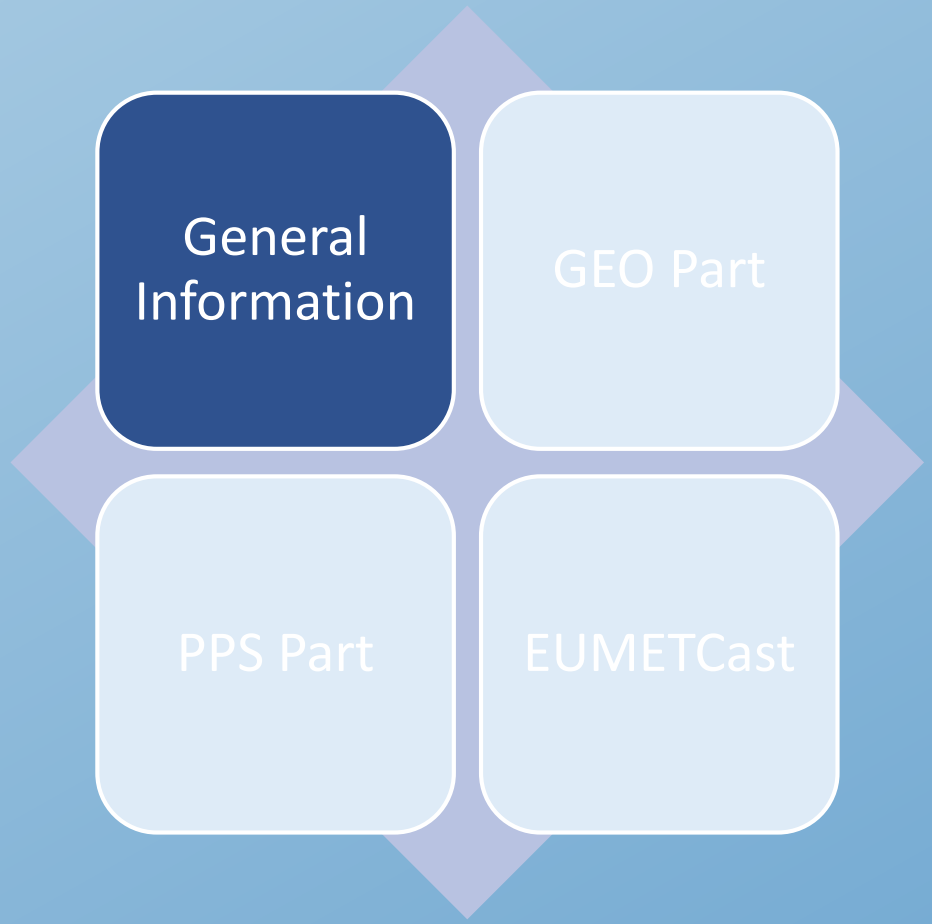
2024 NWC SAF Users' Survey

- From the 3rd of July until the 30th of November
- Email invitation to 436 users
- Number of answers: 64
- Estimated time: 55'
- Number of questions: 82

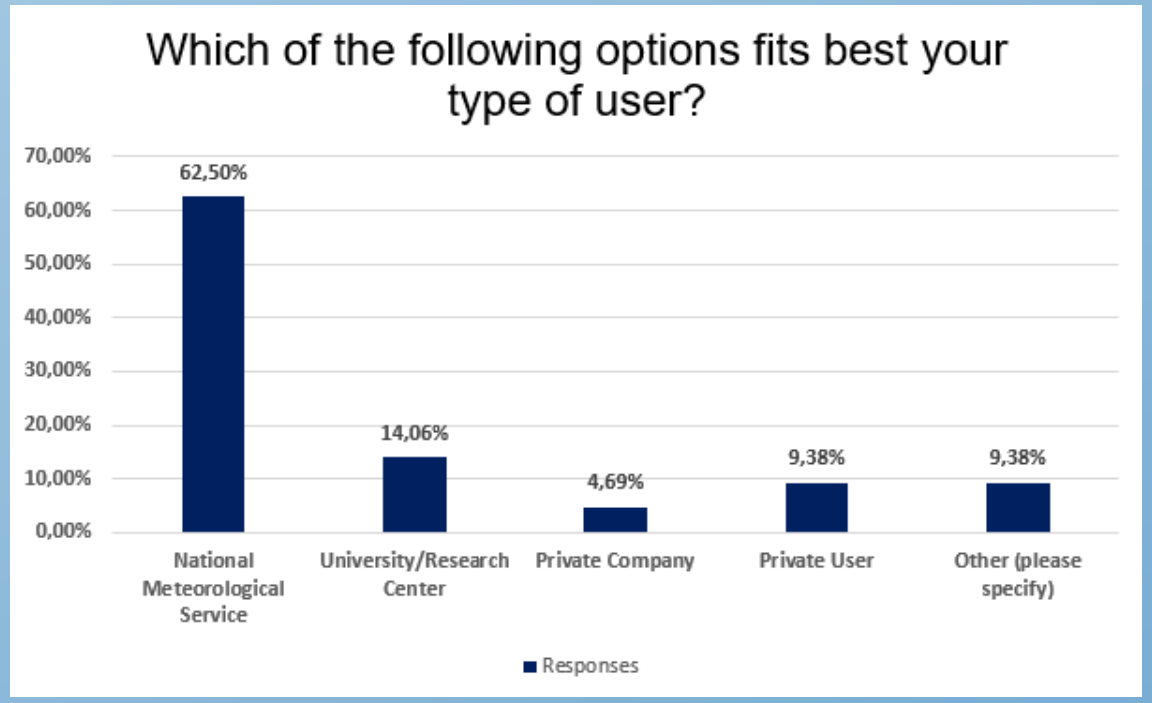
Principal Features



Principal Features



Results



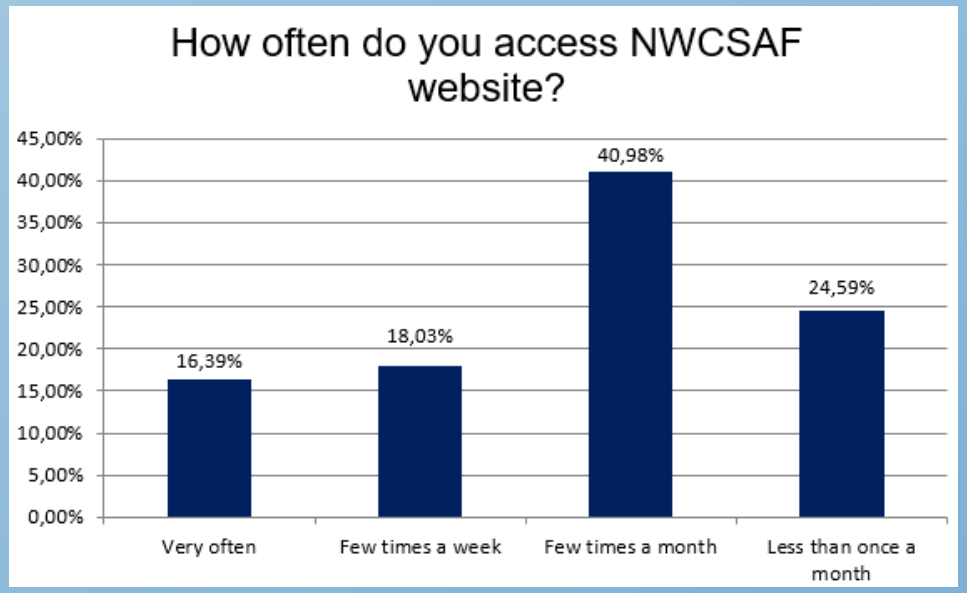
General Information

Results

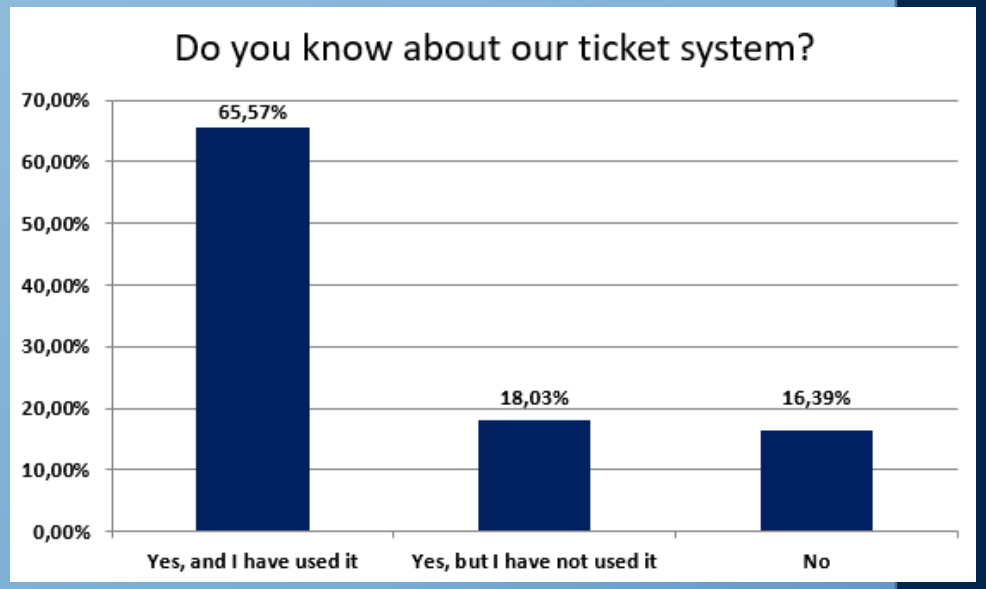
Number of people who answered this question: 64

General Information

Results



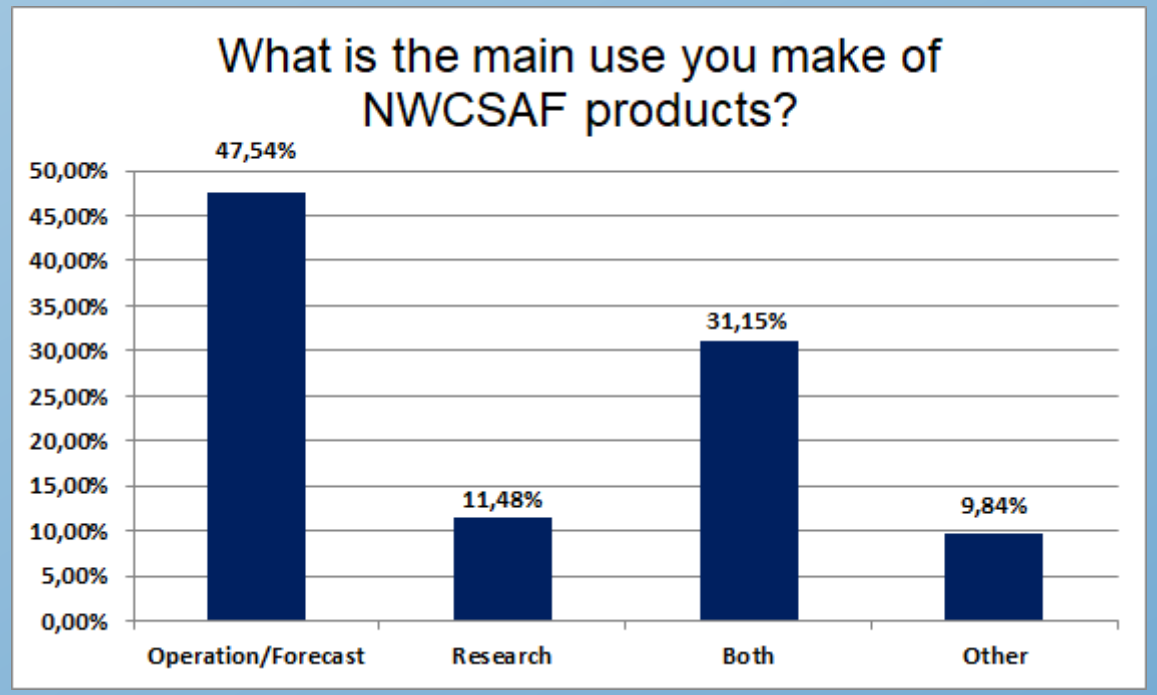
Number of people who answered this question: 61



Number of people who answered this question: 61

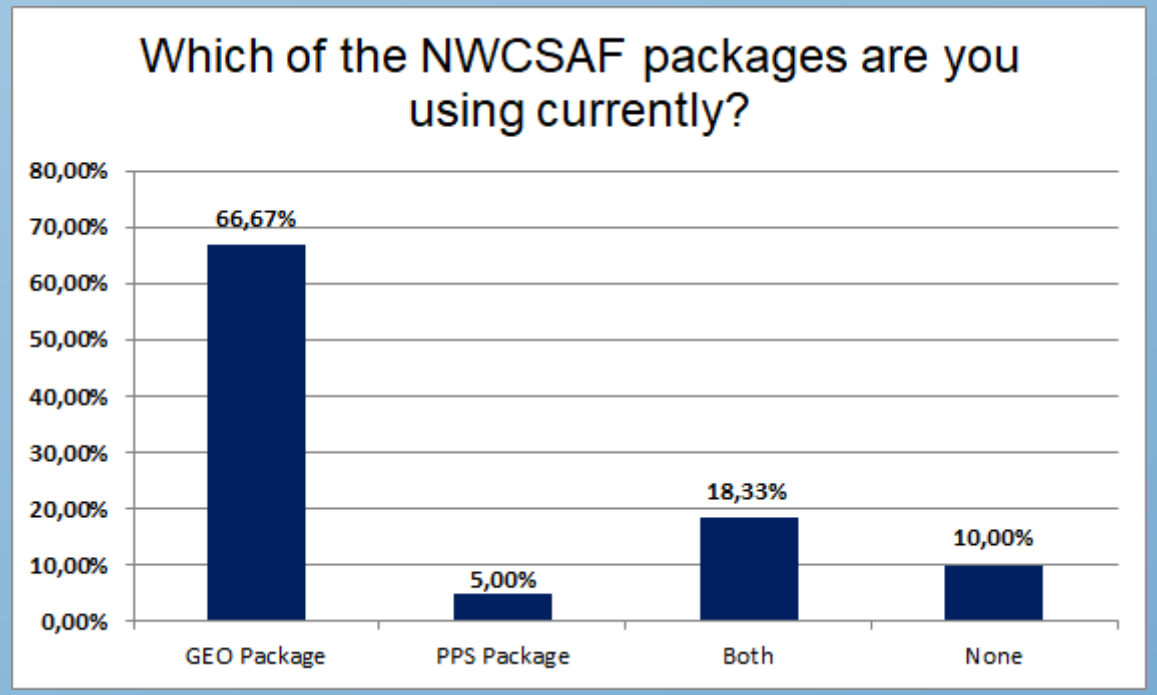
General Information

Results



It's used the word "*operational*" when our SW is used in both nowcasting and very short range forecasting.

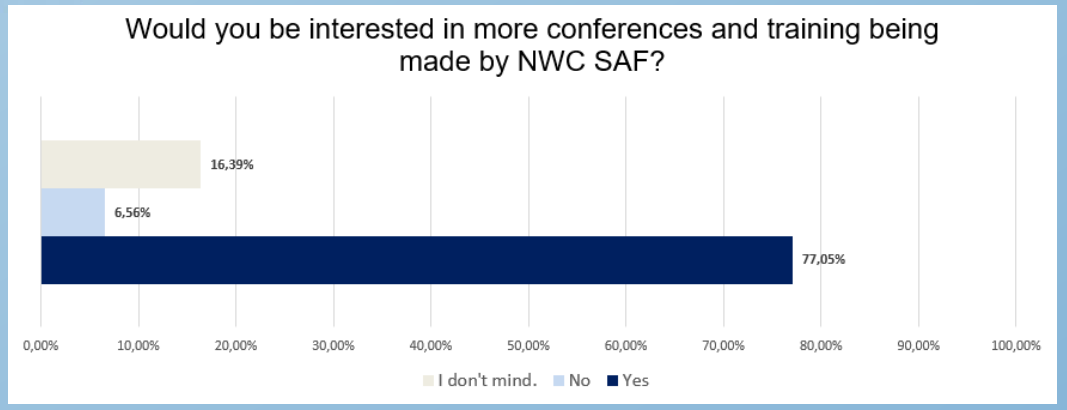
Number of people who answered this question: 61

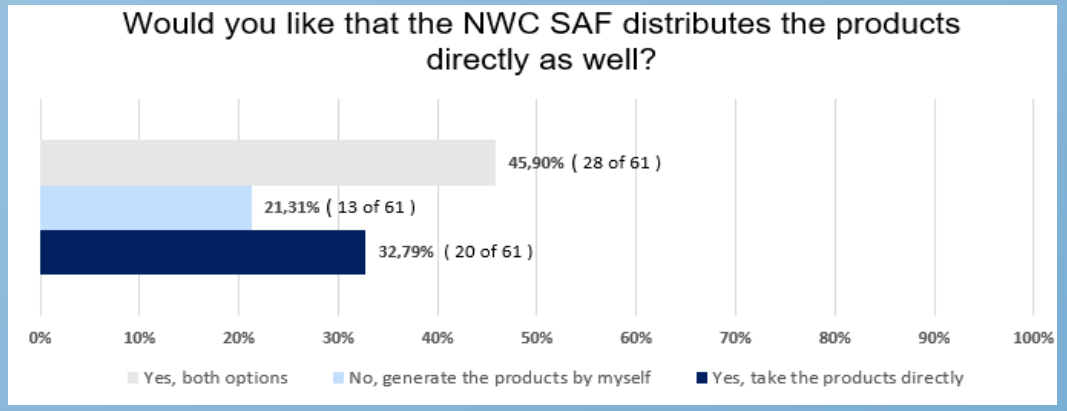


General Information

Results

Number of people who answered this question: 60

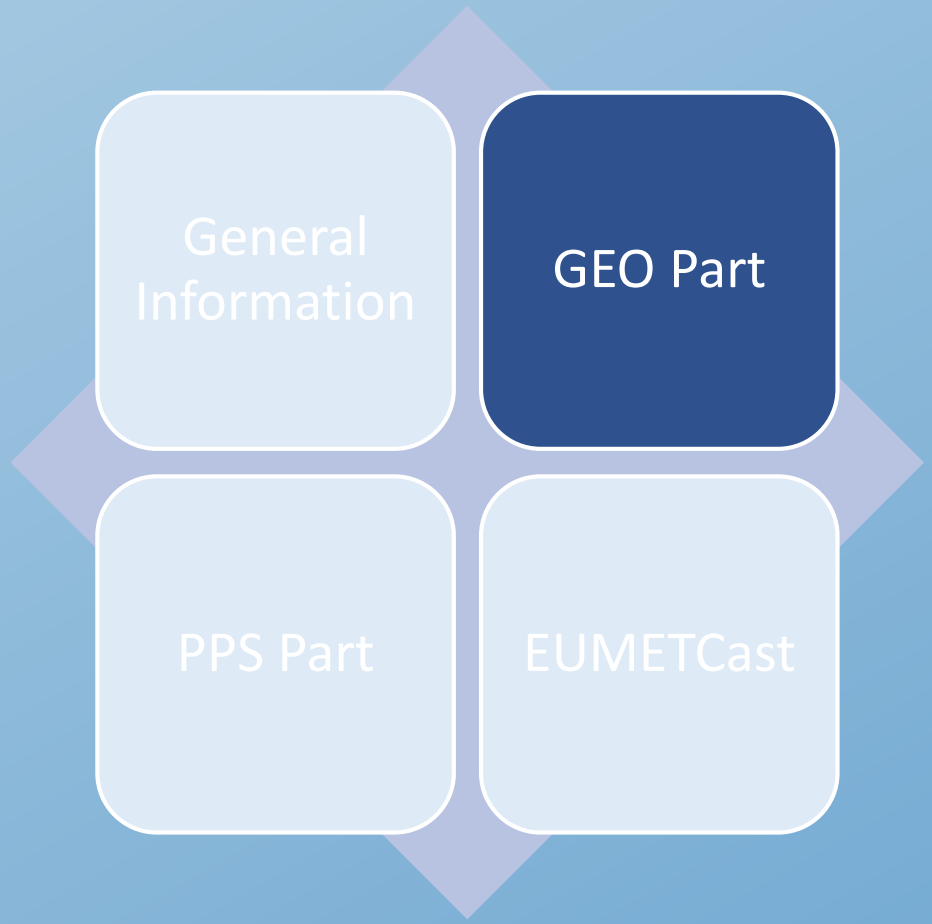




General Information

Results

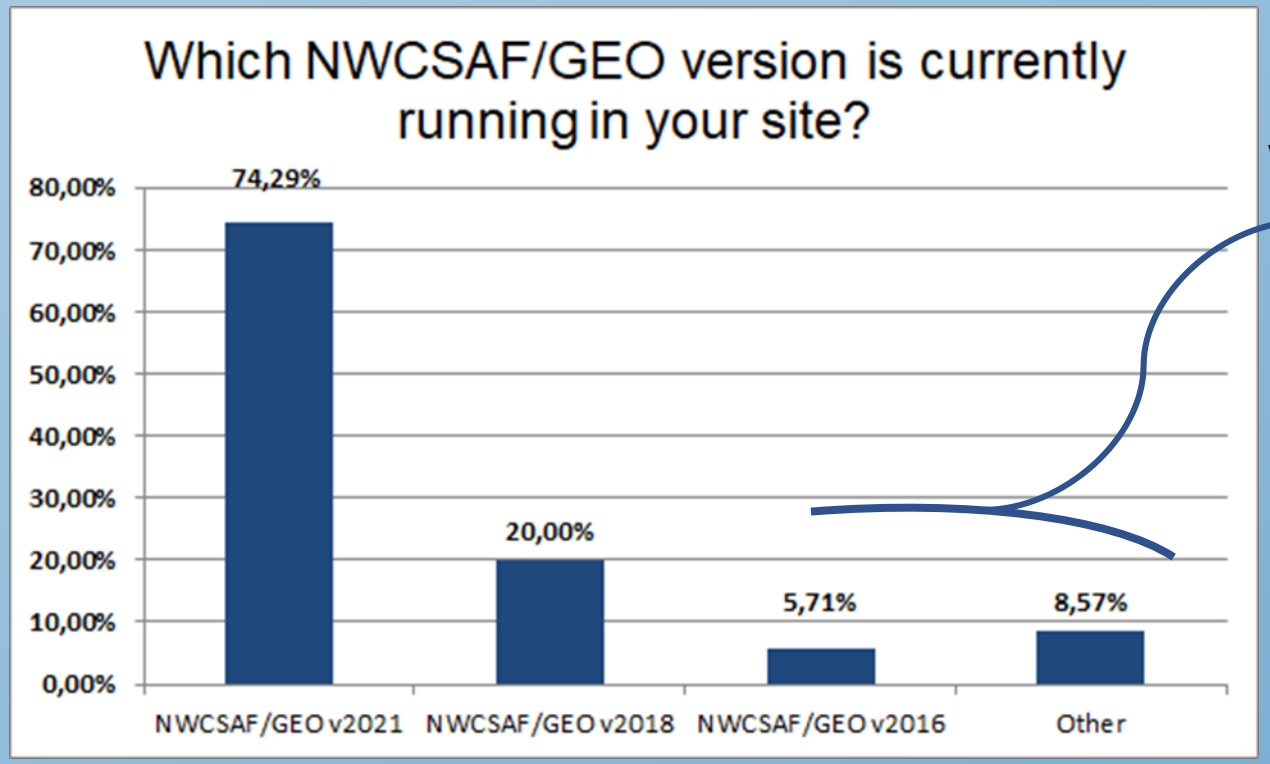
Number of people who answered this question: 61



Results

GEO Part

Results



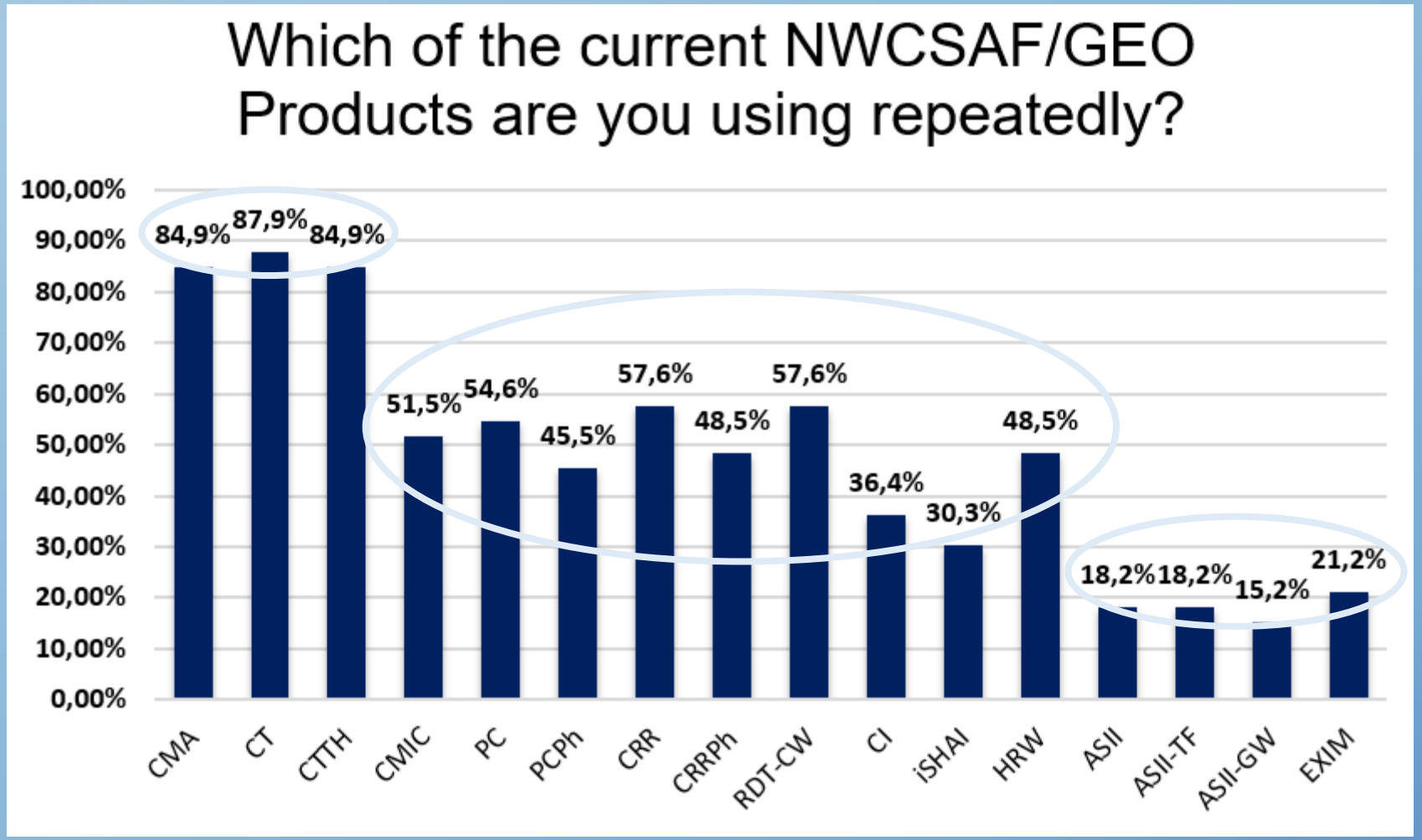
Why these versions are not updated?

Because of lack of human resources!

Number of people who answered this question: 35

GEO Part

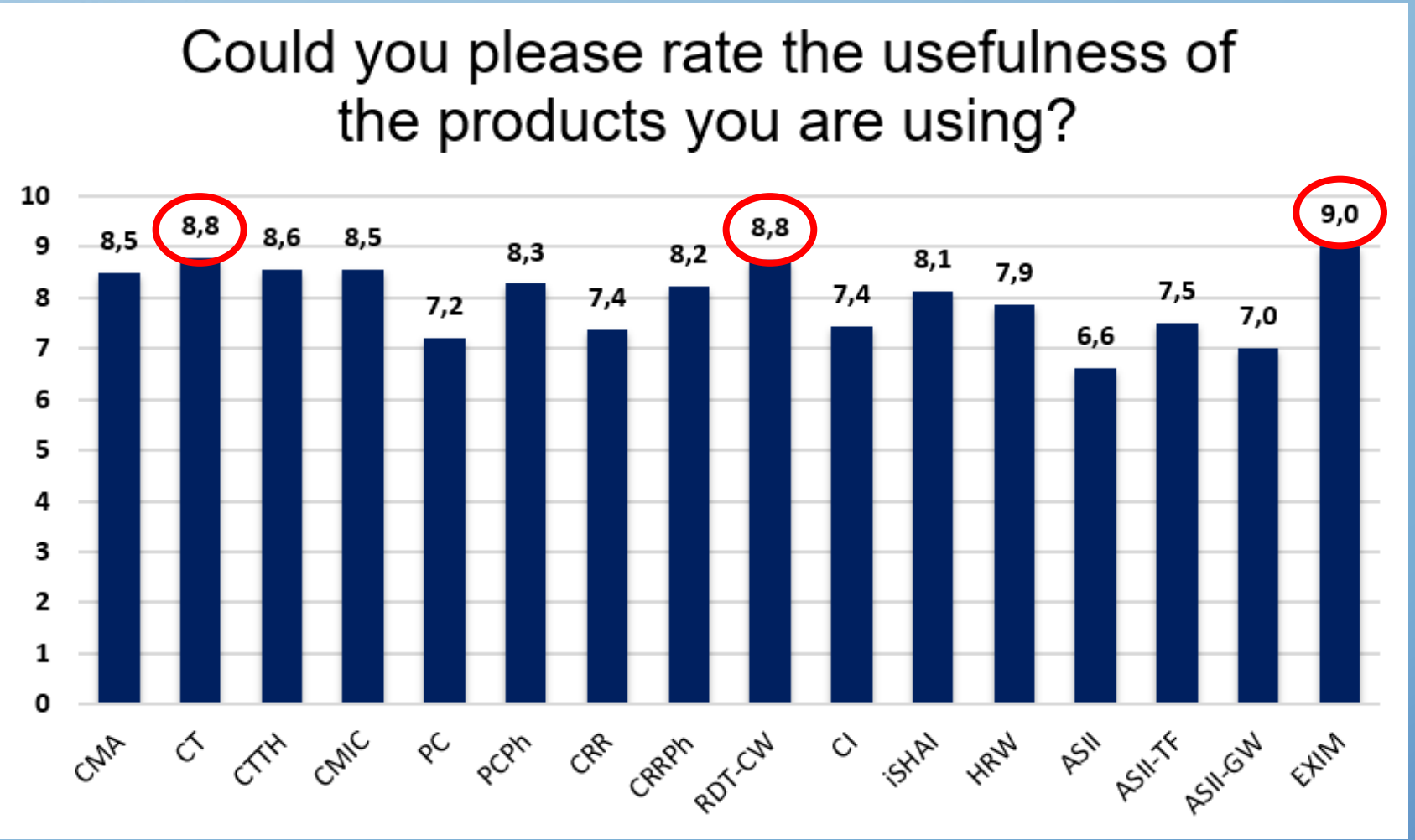
Results



Number of people who answered this question: 33

GEO Part

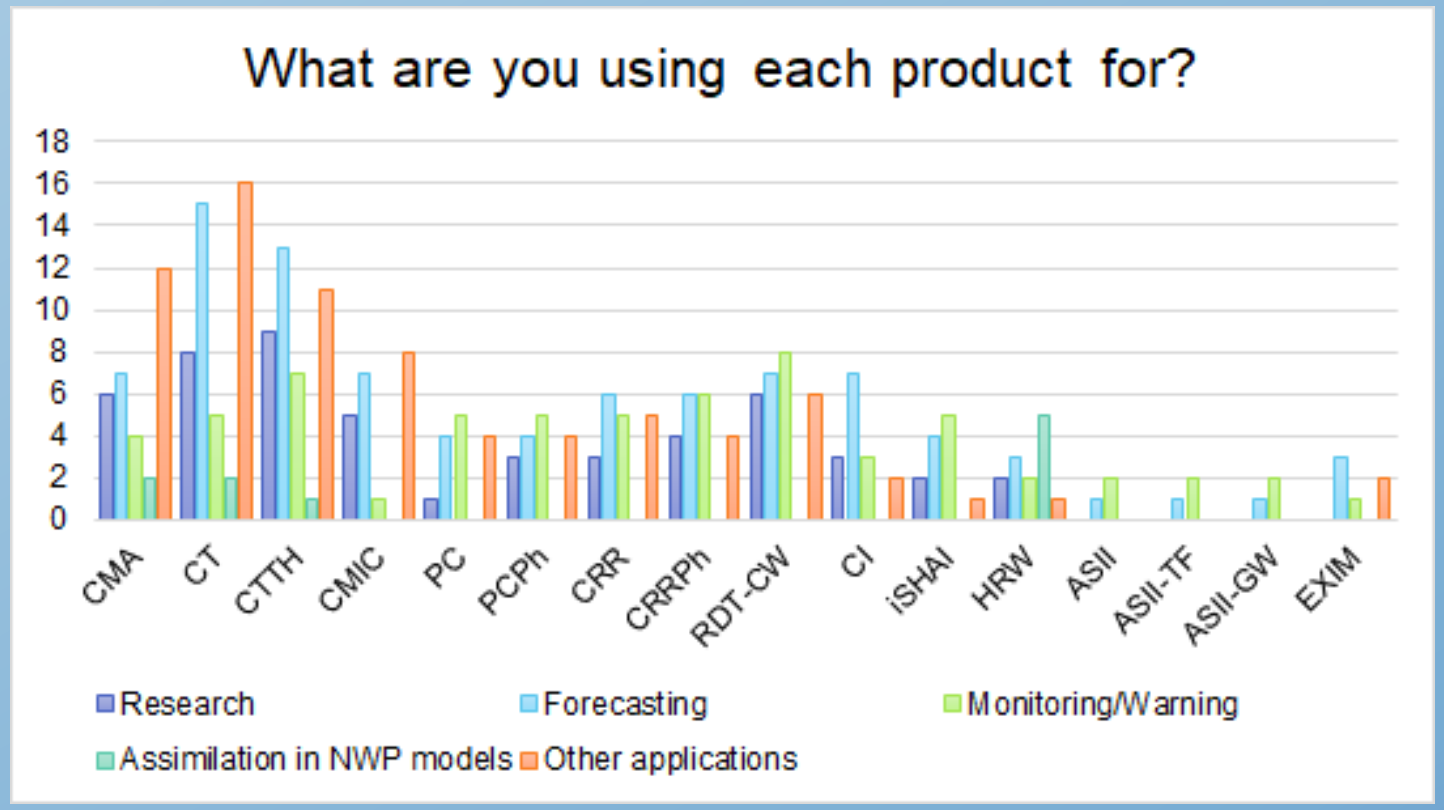
Results



Number of people who answered this question: 31

GEO Part

Results



Number of people who answered this question: 31

What are you using each product for?

- Forecast is the principal use of NWC SAF SW products.
- The most used products are the cloud ones.
- There are again three group of products (cloud ones, conceptual and extrapolated products and the rest)
- Monitoring/Warning option, RDT-CW is the most selected product.
- Assimilation in models, HRWs is the most used product.
- The lack of responses in option "others" leaves us an unknown in which our products are used for.

GEO Part

Results

Number of people who answered this question: 31

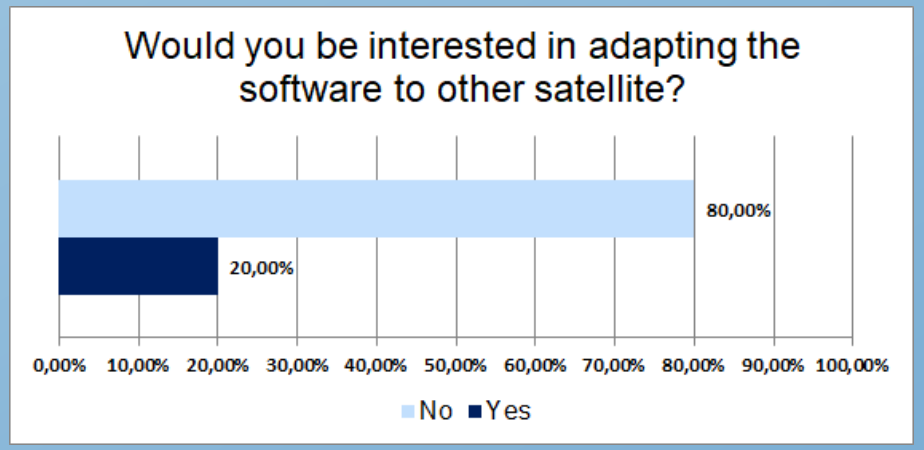
Number of people who answered this question: 32

Indicate which of the current satellites supported by NWC SAF/GEO Software are you using

- MSG 0º is the most used satellite
- After MSG 0º, both MSG Rapid Scan and MSG-IODC are the most utilised satellite, the two of them practically equal
- There is not significant differences between the use of GOES-16/17/18 and HIMAWARI-8/9

GEO Part

Results

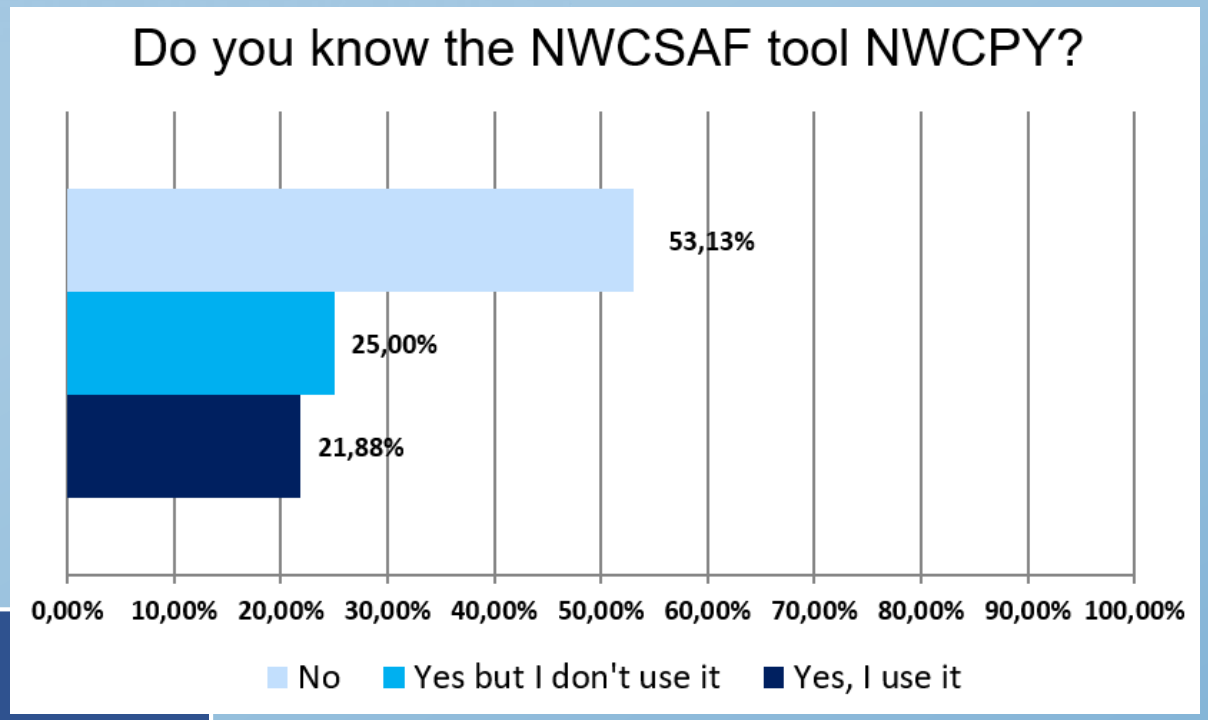


The majority of the "Yes" are interested in MTG and one in Fengyun-4B

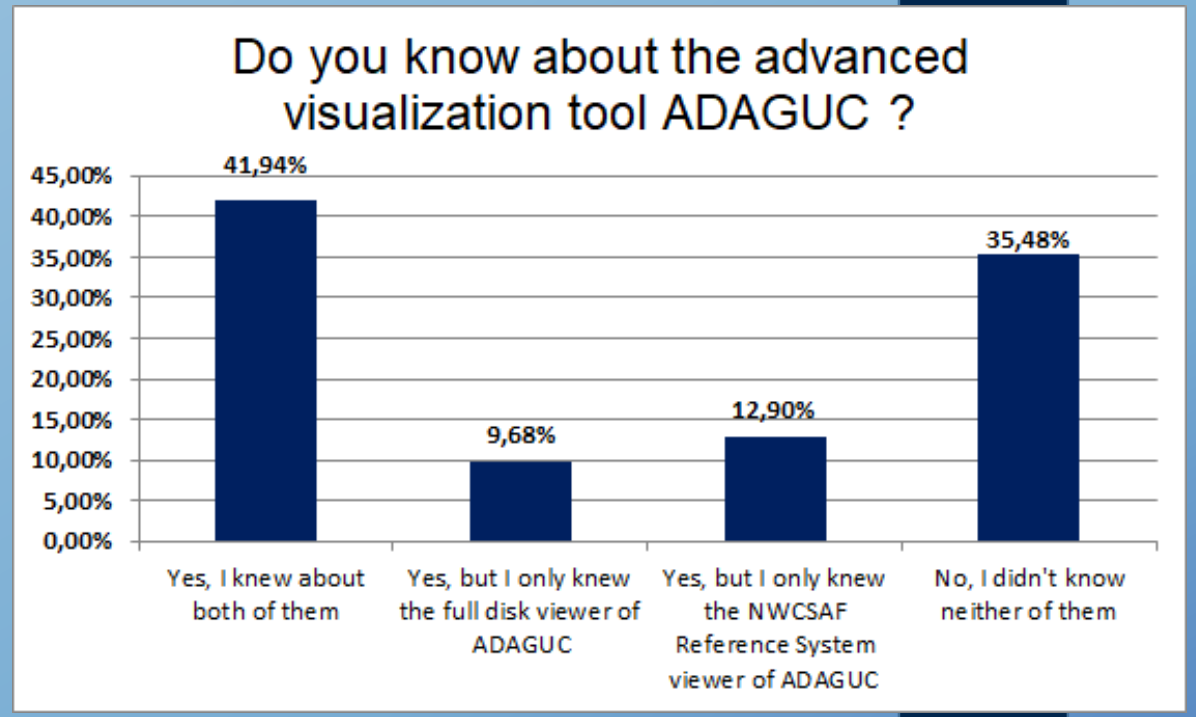
Number of people who answered this question: 30

GEO Part

Results

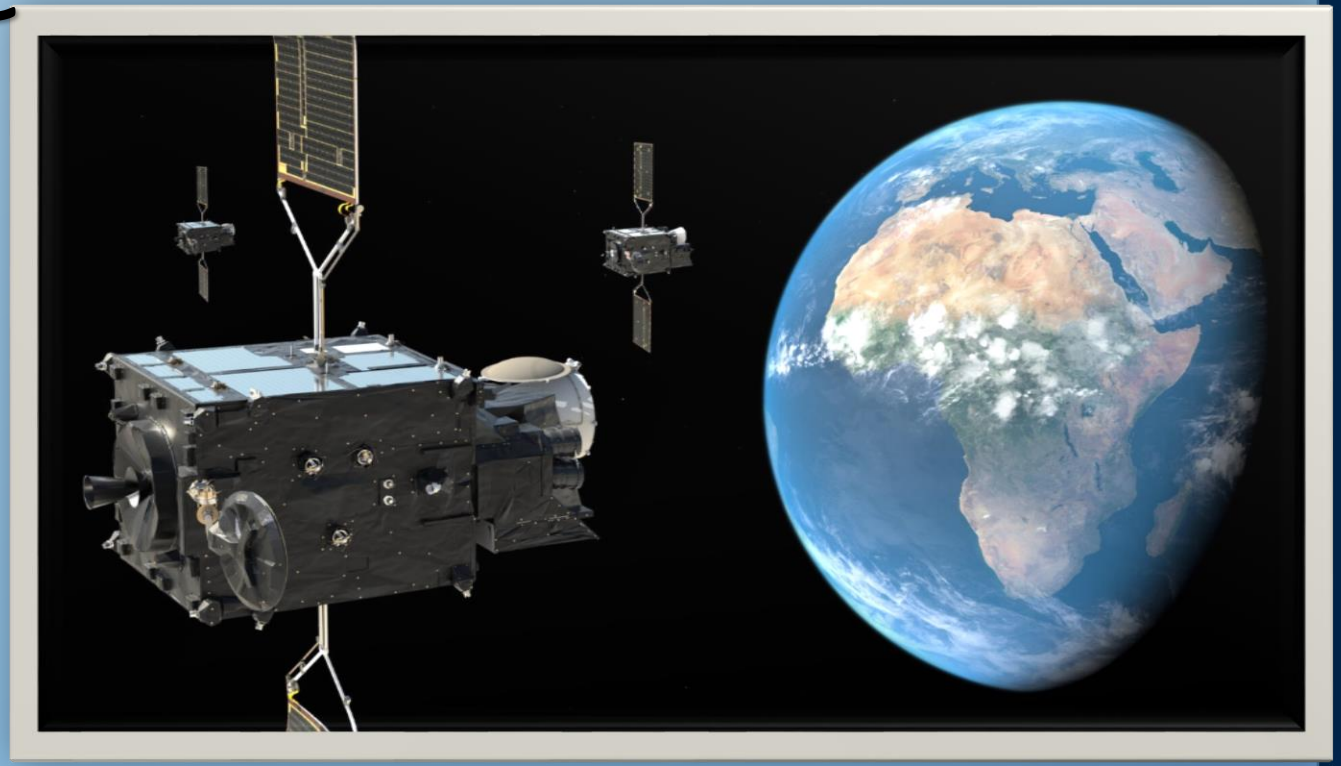


Number of people who answered this question: 32



Number of people who answered this question: 31

Coming future



GEO Part

Results

Could you please specify your future needs in Nowcasting?	
Thunderstorm Warning and Tracking	82,14%
Cloud Pre-convective Environment (Convection Initiation)	75,00%
Hail Detection	67,86%
Clear Air Pre-convective Environment (Instability)	60,71%
Cloud Top Microphysics	57,14%
Precipitation Phase (such as snow, rain)	57,14%
Precipitation probability and rate	53,57%
Cumulus/Stratus distinction	50,00%
Atmospheric Motion Vectors (AMVs) for a specific need	50,00%
Icing due to super-cooled water	46,43%
Icing due to high altitude ice crystals	46,43%
Extrapolated Imagery	42,86%
Turbulence Detection	39,29%
Detection, tracking and forecast of dry intrusions	35,71%
Other	10,71%

GEO Part

Results

Other: Fog, risk for freezing drizzle

Number of people who answered this question: 28

GEO Part

Results

Which new NWC products based on MTG-IRS and services could be interest for your service?	
Temperature and humidity vertical profiles	71,43%
Temperature and humidity vertical profiles incorporating ground station data	71,43%
Atmospheric water content parameters and instability indices	66,67%
Winds and winds profiles obtained from MTG-IRS data	61,90%
Reprojection of disseminated MTG-IRS L1 and L2 products onto the MTG-FCI grid	52,38%
Generation of IRS L1 imagery like products *	52,38%
Others	9,52%

Other: MUCAPE

*Imagery like products are: RGB images, linear combination of MTG-IRS channels to provide simple retrival of atmospheric parameters, etc.

Number of people who answered this question: 21

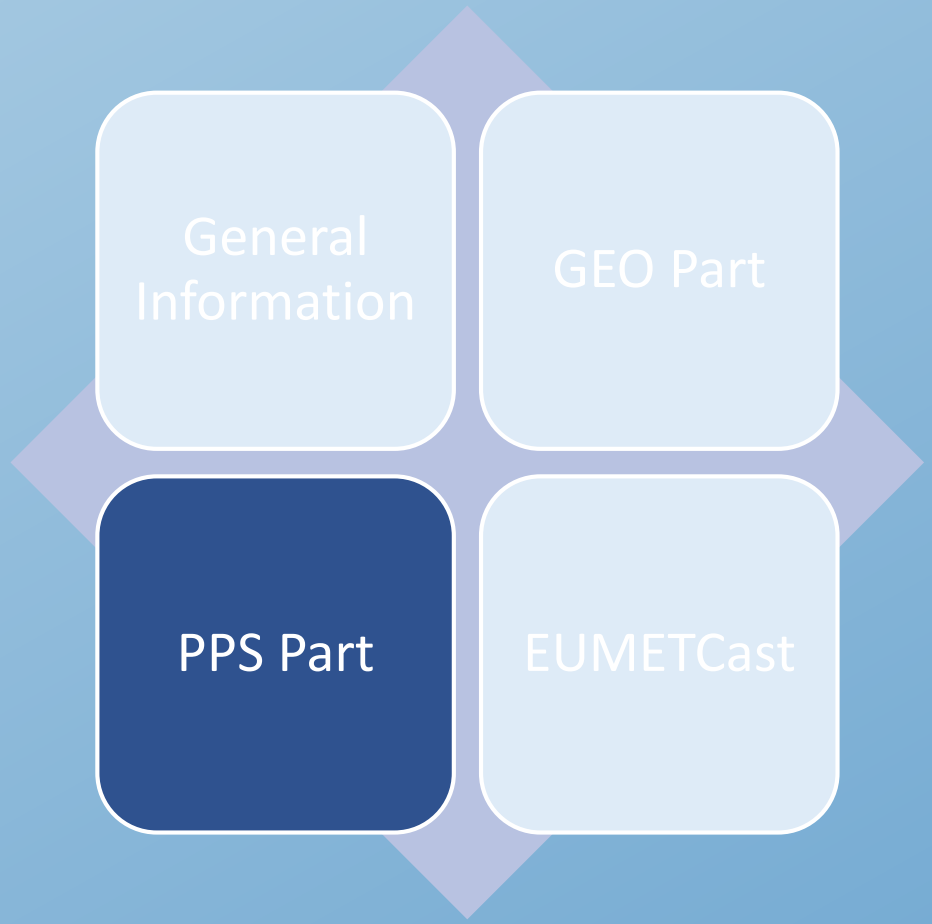
Which of the EUMETSAT MTG-LI L2 data/products could be of interest for your service?					
Event	Flashes	Groups	Accumulated Flash (AF)	Accumulated Flash Area (AFA)	Accumulated Flash Radiance (AFR)
3	4	3	7	7	4

Which other MTG-LI products would you be interested in?			
Minimum Flash Area	Flash Area	Flash Centroid Density	Others
4	2	2	AF, AFA, AFR

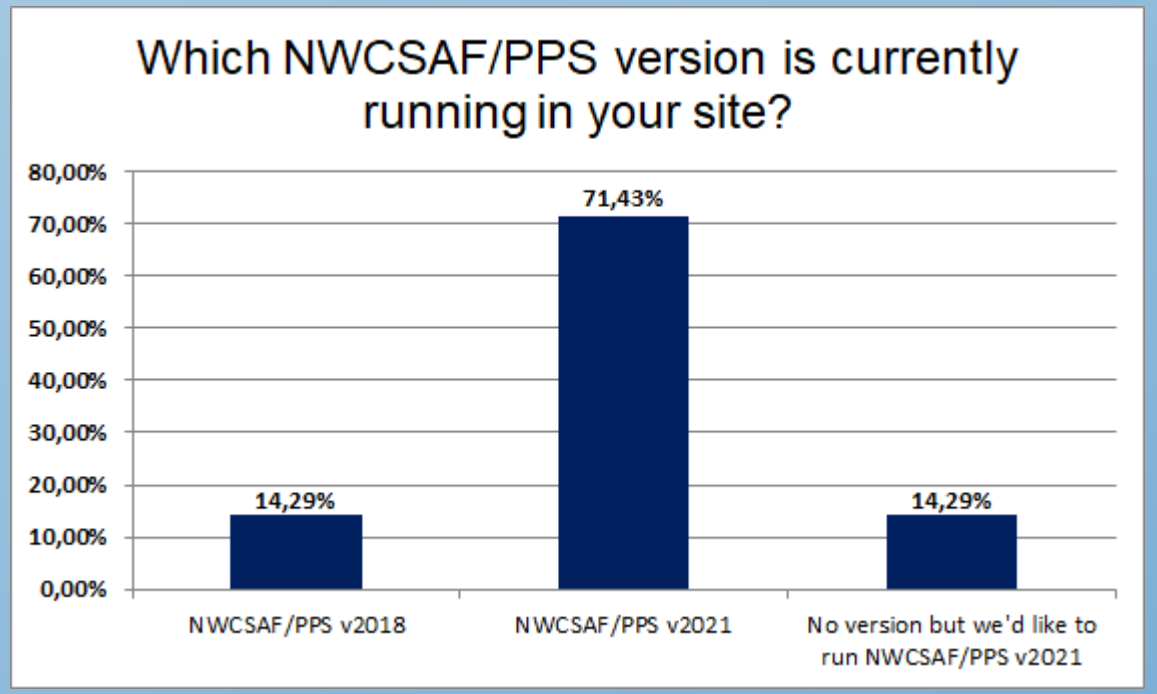
GEO Part

Results

Number of people who answered this question: 13 and 9



Results



PPS Part

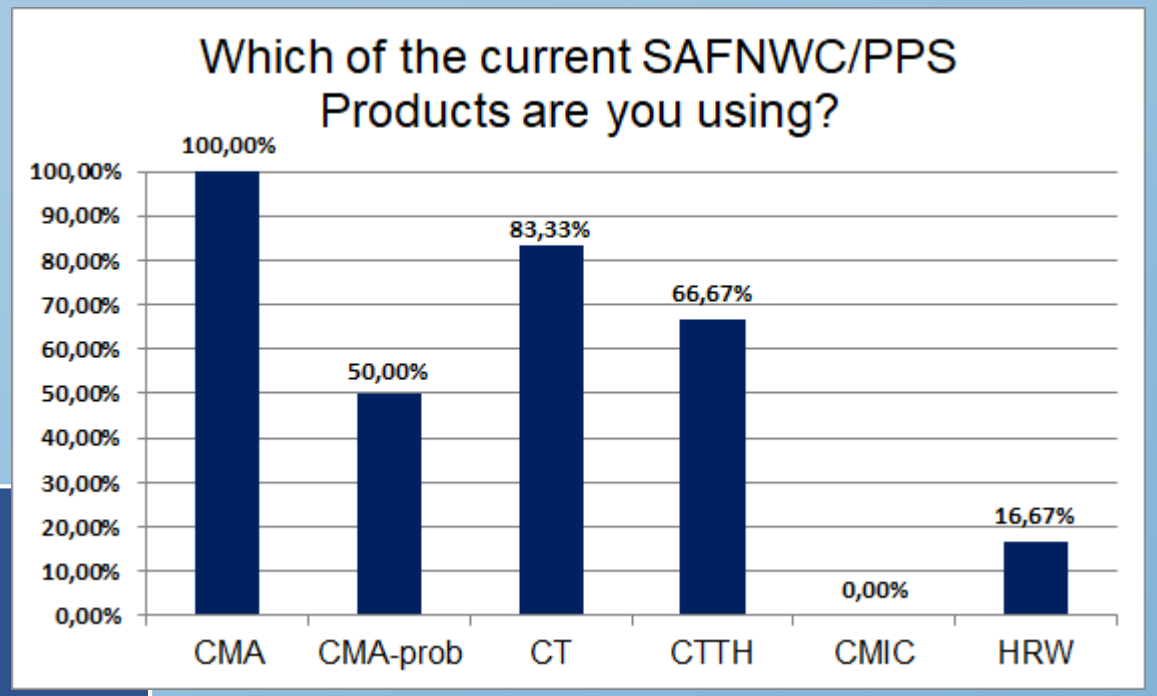
Results

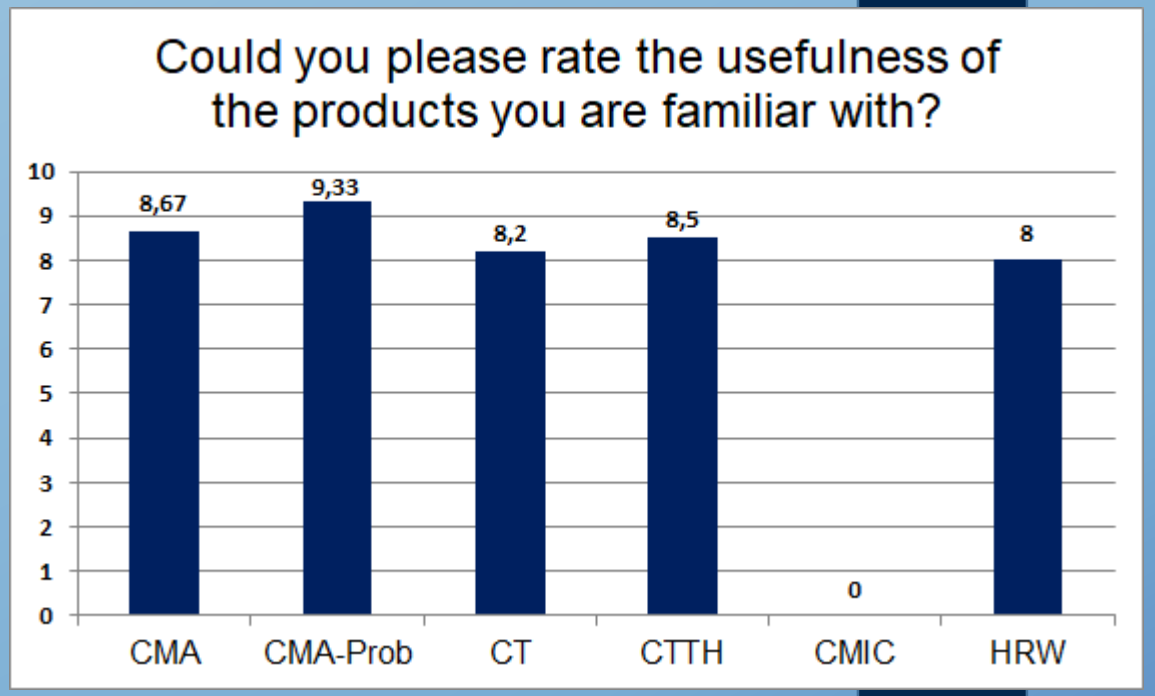
- Two people who marked v2021 have said they still use v2014
- No version. The user doesn't see PPS configuration easy. Lack of human resources too.

Number of people who answered this question: 7

PPS

Results





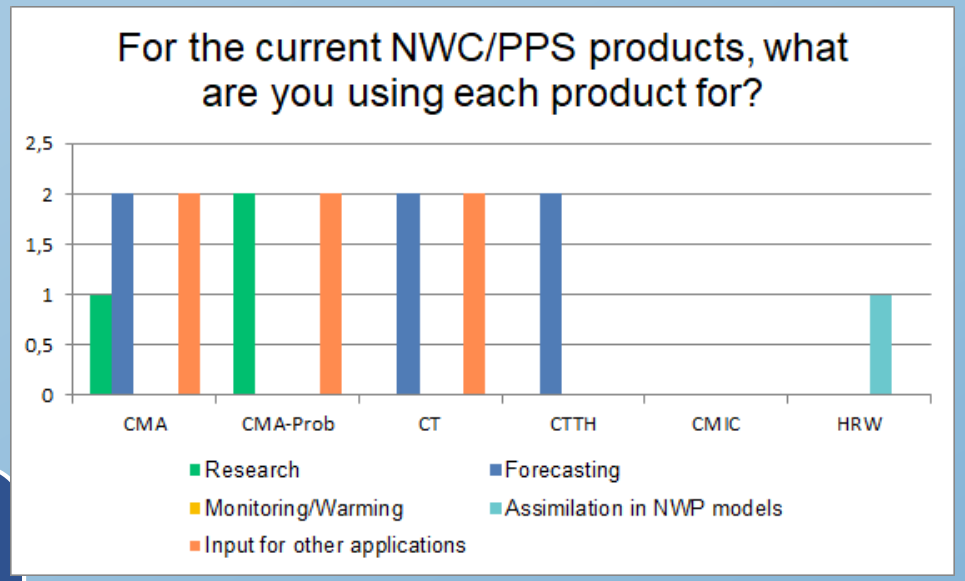
No one that answered the survey uses the CMIC, but it's known CMIC is used operationally at SMHI and at CM SAF

Number of people who answered this question: 6

Number of people who answered this question: 6

PPS Part

Results



- Principal use: forecasting
- No products are used as Monitoring/Warning
- Assimilation in models, HRW is the most used product.
- Other: Generating Ice Surface Temperature Products

Number of people who answered this question: 5

Coming future

PPS Part

Results

Could you please specify your future needs in Nowcasting?
Icing due to super-cooler water icing due to high altitute crystals
Cloud Pre-convective Environment (Convection Initiation)
Turbulence Detection Cloud Base (probabily)
Clear Air Pre-convective Environment (Instability)
New sensors adaptation
Reaseach
Cloud base products
Clear Sky fog development risk

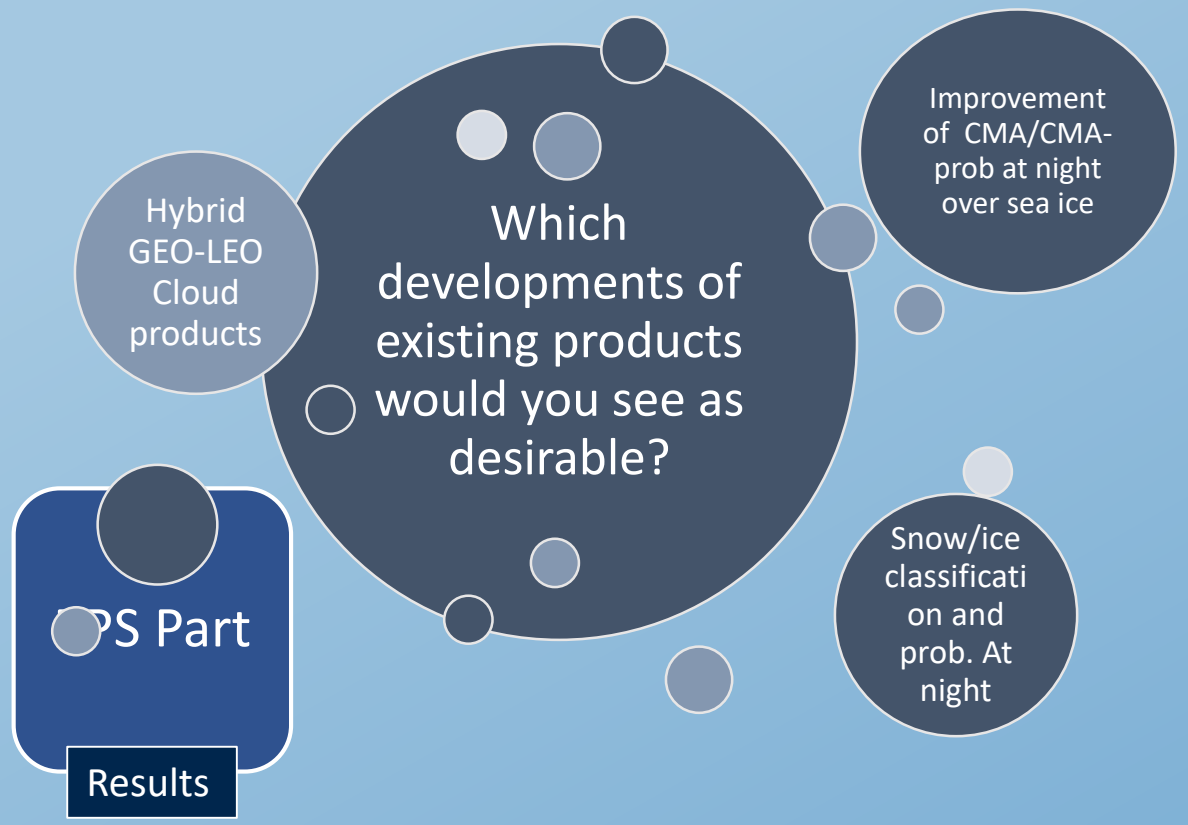
PPS Part

Results

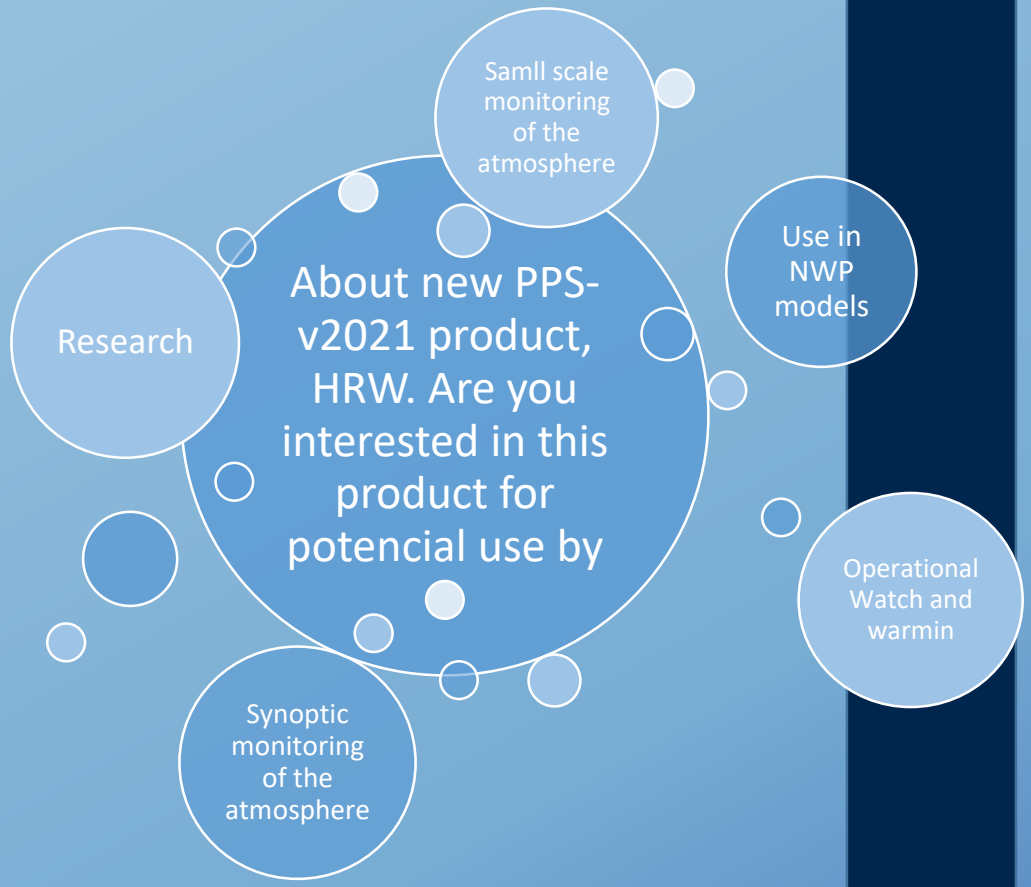
"Easy to install, use and maintain (…) The installation has improved by years since versions back in the early 2000"

PPS Part

Results



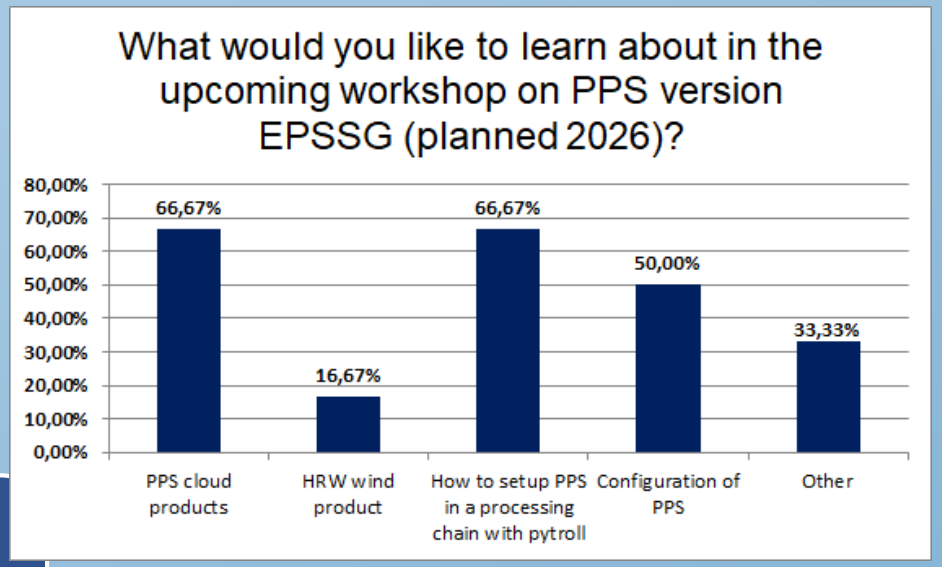
Number of people who answered this question: 3



Number of people who answered this question: 6

PPS Part

Results



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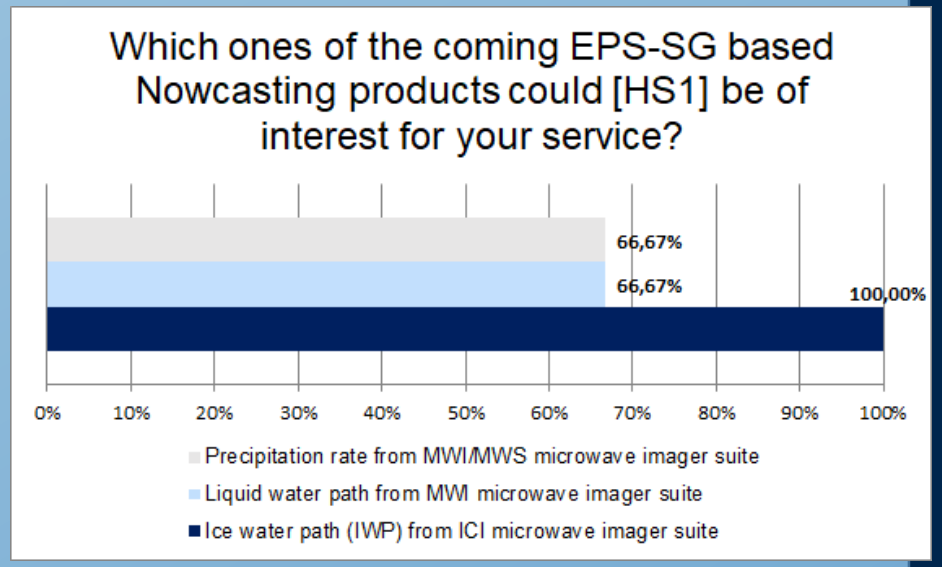
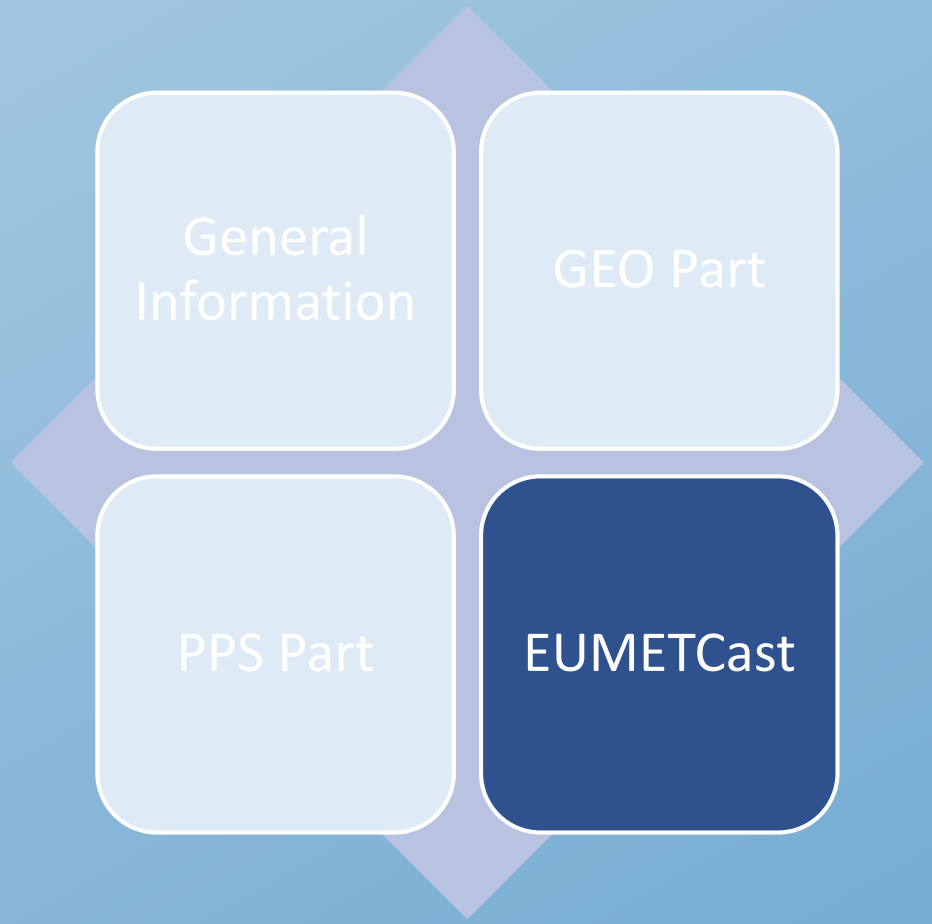


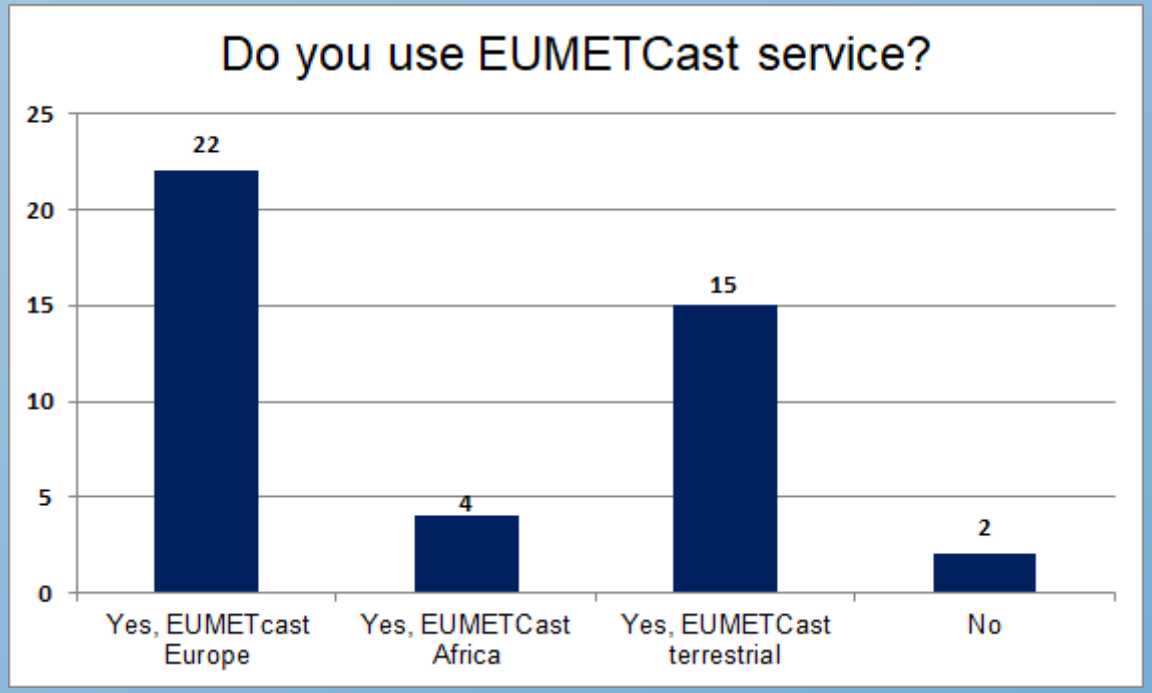
Number of people who answered this question: 3



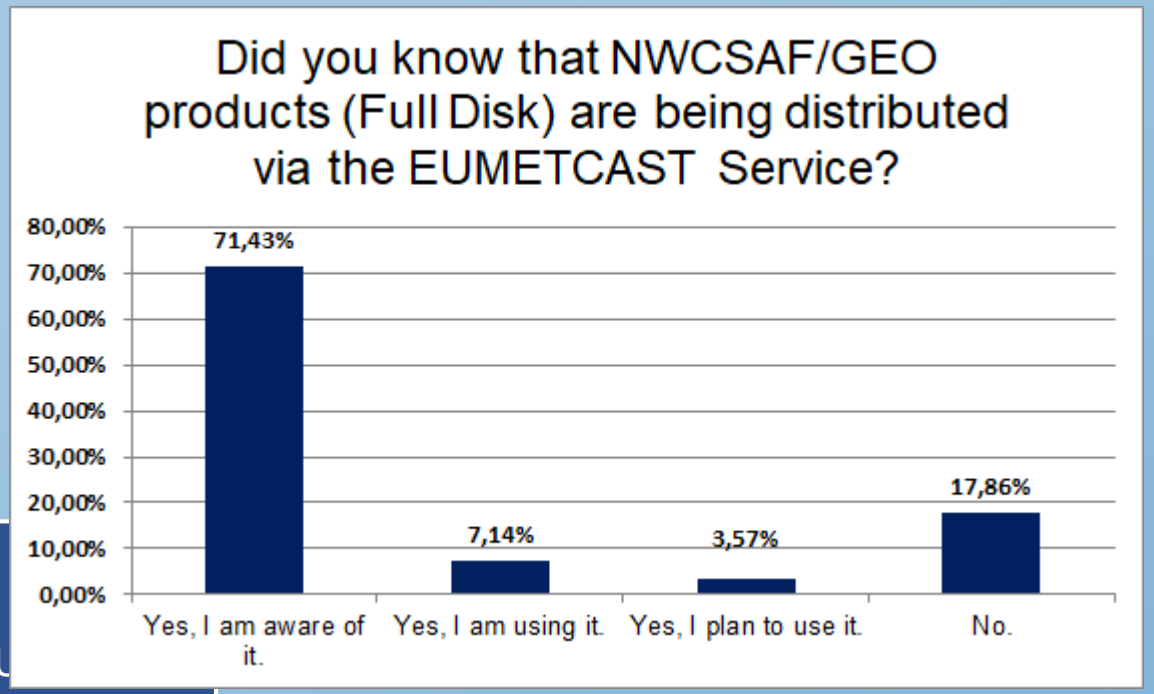
Results

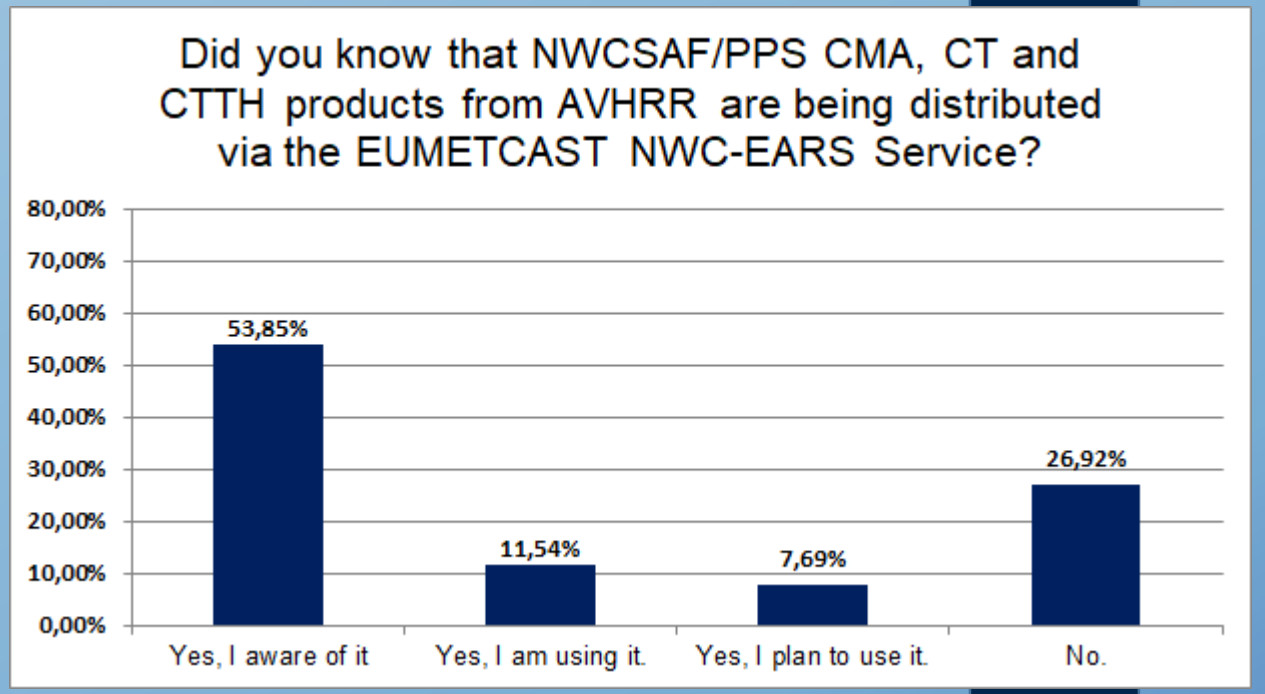
EUMETCast

Results



Number of people who answered this question: 28





EU

Results

Number of people who answered this question: 28

Number of people who answered this question: 26

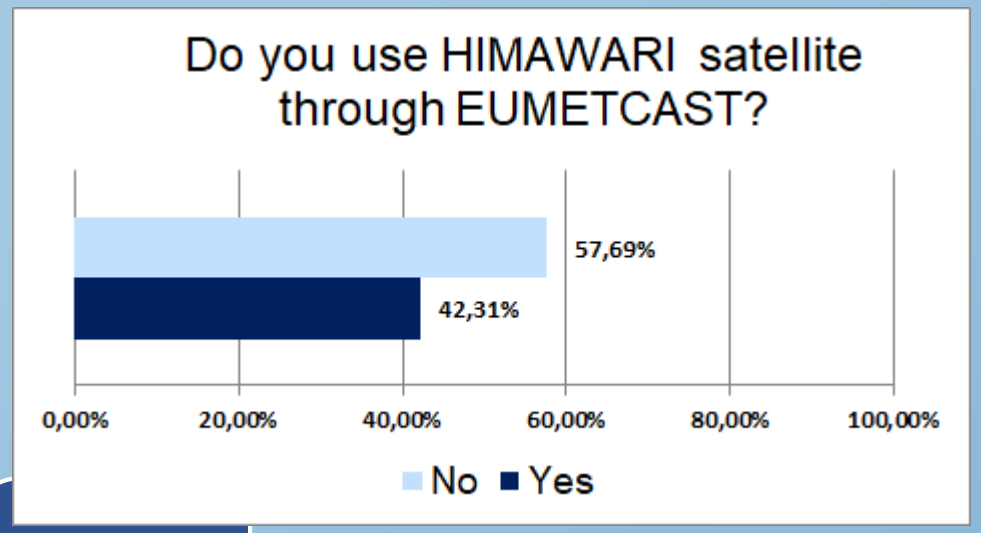
What NWCSAF/MSG or MTG prodcts would be interested for you to be distributed?

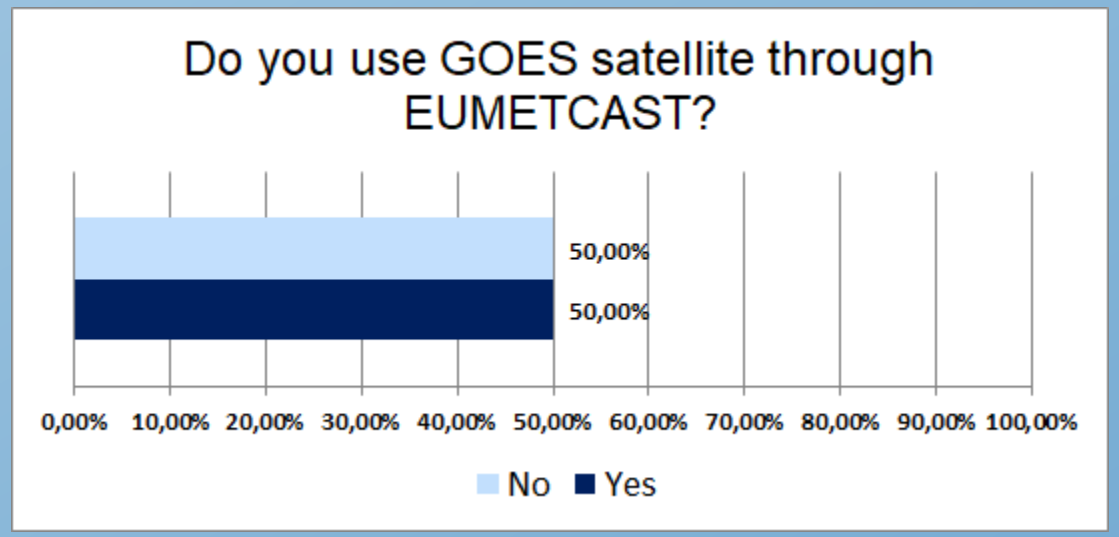
- Clouds, PC, CRR
- ISHAI-TPW
- True Colour Type RGB
- All products
- CMA, CT, CTTH, HRW
- EUMETCast
- EXIM
- GW and TF*

Results

18 users answered this question

*Gravity Waves and Tropopause Foldings





EUMETCast

Results

6 of the total (23%) have specified which instrument do they use. 2 of them both (ABI and GLM) and the rest, 4, ABI instrument.

Number of people who answered this question: 26

Number of people who answered this question: 26

"Congratulations on great work. It is very important your work specially on MTG data. Thank you!"

"thank you for your great job!"

…. some comments from our users

"The installation has become very easy for both GEO and PPS which is very good. It is nice we can use the NWP data we want to as input. (…)"

"Greak work! Thank you so much for developing and mainteining the products and associated software We find them very useful at the Bureau of Meteorology"

"The NWCSAF application is a very useful for nowcasting"

"Looking forward for MTG. Curious for the turbulence-/gravity wave nowcasting product with MTG-S/I"

"Thank you a lot for your hard work on PPS"

"It's a crucial service for several applications in our institute (LSA SAF, Operational nowcasting, among others), with an excellent user interaction via the tickets system"

"Thank you so much! You are the best!"

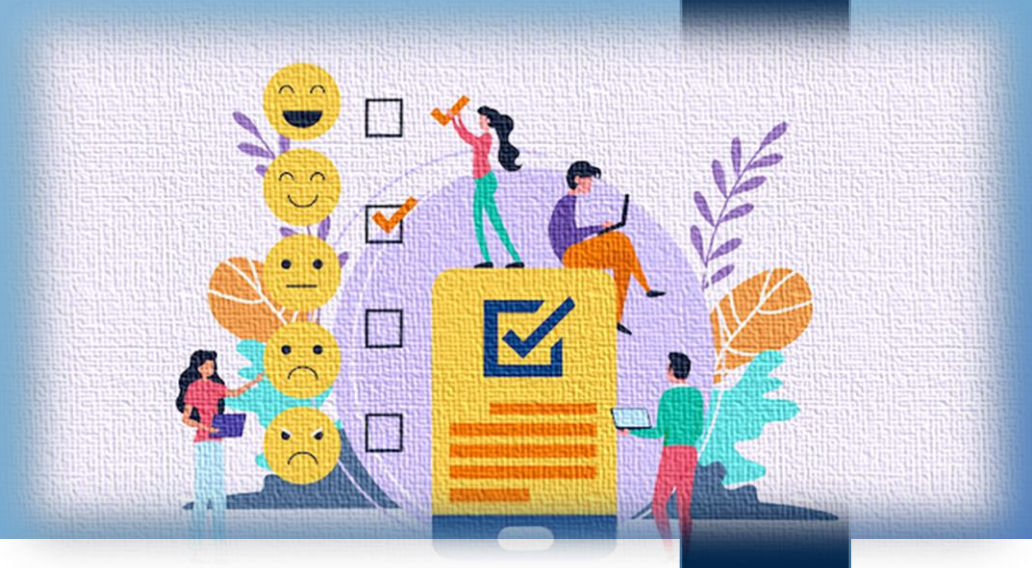
Results

"My understanding is that it is a very useful tool for now and médium forecasting"

- The majority of answers come from user that belong to Meteorological Services.
- 20 of 61 (32,79%) users that have answered this Survey would rather to take the products directly.
- The popularity of our GEO products are great. Only the ASII has a rate under 7. The "winner" is the EXIM even it's not one of the most used product.
- Forecasting is the main use that users make of our products. However, it seems there are products that are more interested in other applications: Monitoring/Warning the RDT-CW and Assimilation in model (both GEO/PPS) HRW.
- NWC SAF products are mainly generated for EUMETSATs' Satellites, being MSG 0º the main one.

Conclusions

- There is a considerably number of users lack of awareness about NWCPY and ADAGUC viewer tool.
- Products regarding pre-convective enviorement convection and future thunderstorms seem to be the most demanded ones, (both GEO and PPS)
- Vertical profiles of temperature and humidity are the most chosen for users as new products in MTG-IRS satellite.
- So many LI products seem to be attractive to users.
- About PPS, products have a good mark (all of them above 8)
- Users that have answered the EUMETCAST part of the Survey have a good knownledge of this service and they have interest in the distribution of the products, specially the cloud ones.

Conclusions

Thank you!!