Current confidence in FMD freedom

Results of the THRACE surveillance programme

EuFMD

Management Meeting, Sofia, 2017

Background

High-risk area for the introduction of exotic diseases into Europe

Current objectives of surveillance:

- increase <u>confidence of freedom</u>
- increase the likelihood of <u>early detection of incursion</u>

Surveillance for Thrace region

Ongoing surveillance activities

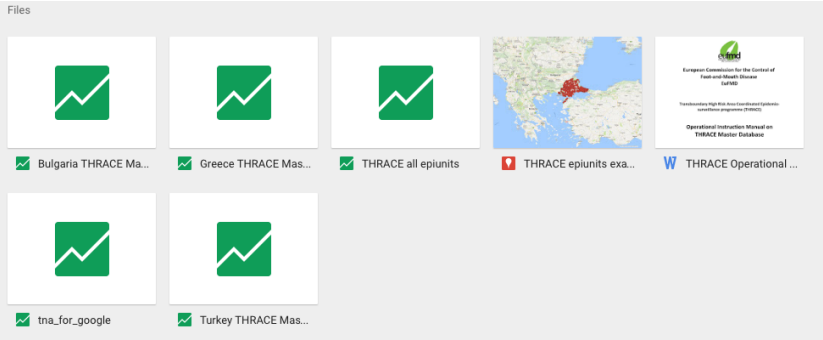
- Passive farmer reporting
- Abattoir surveillance
- Clinical examination
- Serosurveys

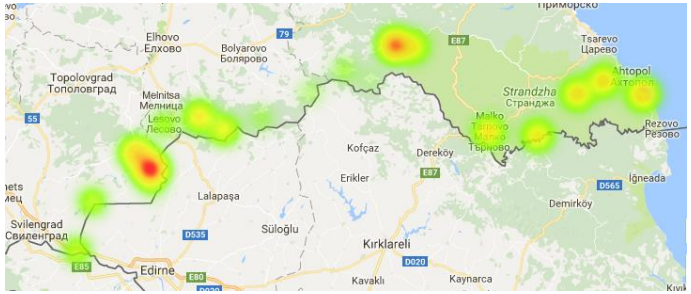
Confidence of freedom

Contributing factors:

- Surveillance sensitivity
- Multiple surveillance activities
- Accumulation of historical evidence over time
- Risk of introduction of disease over time

Database





Bulgaria THRACE Master Database

Copied at Wed Dec 30 05:01:55 PST 2015 from http://www.google.com/fusiontables/DataSource?do... more >>
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Filter | No filters applied. Sorted by 'Date of inspection' | Saved

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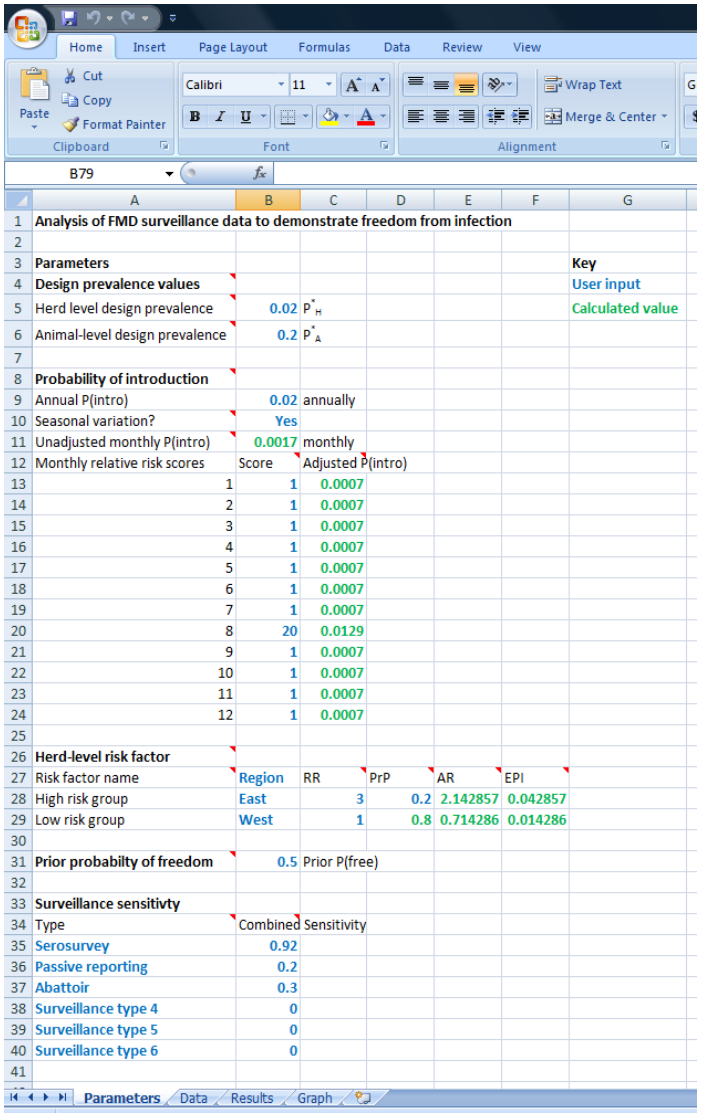
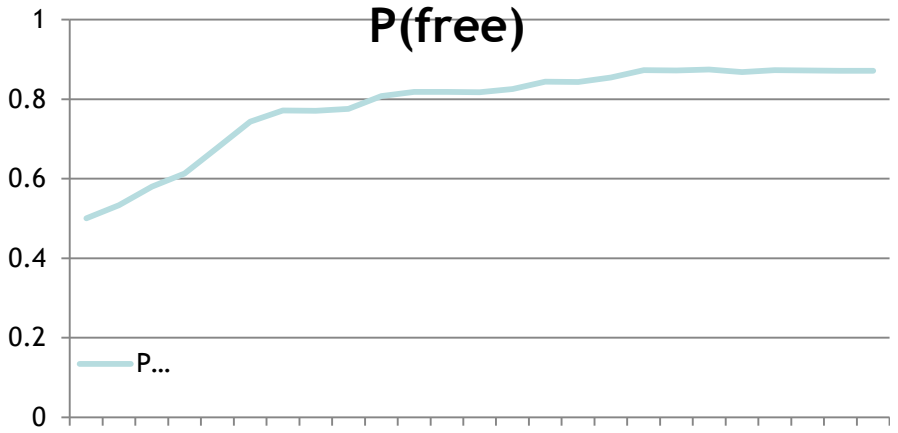
Date of inspection	Country	District	Village	Farm Latitude	Farm Longitude	Cattle	Sheep	Goats	Pigs	W Buffalo	Cattle clin exam	Cattle clin pos FMD	Ca
2017-02-21	Bulgaria	Svilengrad	Kapitan Andreevo										
2017-02-20	Bulgaria	Malko Tarnovo	Slivarovo				41	40					
2017-02-16	Bulgaria	Topolovgrad	Filipovo (Topolovgrad)			206	32				51		
2017-02-16	Bulgaria	Topolovgrad	Prisadets			101		131			45		
2017-02-15	Bulgaria	Sredets	Belevren			160					50		
2017-02-14	Bulgaria	Elhovo	Lesovo			266	630	197		35	30		
2017-02-14	Bulgaria	Topolovgrad	Radovets			95	335	414			43		
2017-02-14	Bulgaria	Sredets	Gorno Yabalkovo			148	356	17			49		
2017-02-13	Bulgaria	Tsarevo	Brodilovo			101	178	63		10	45		

Model

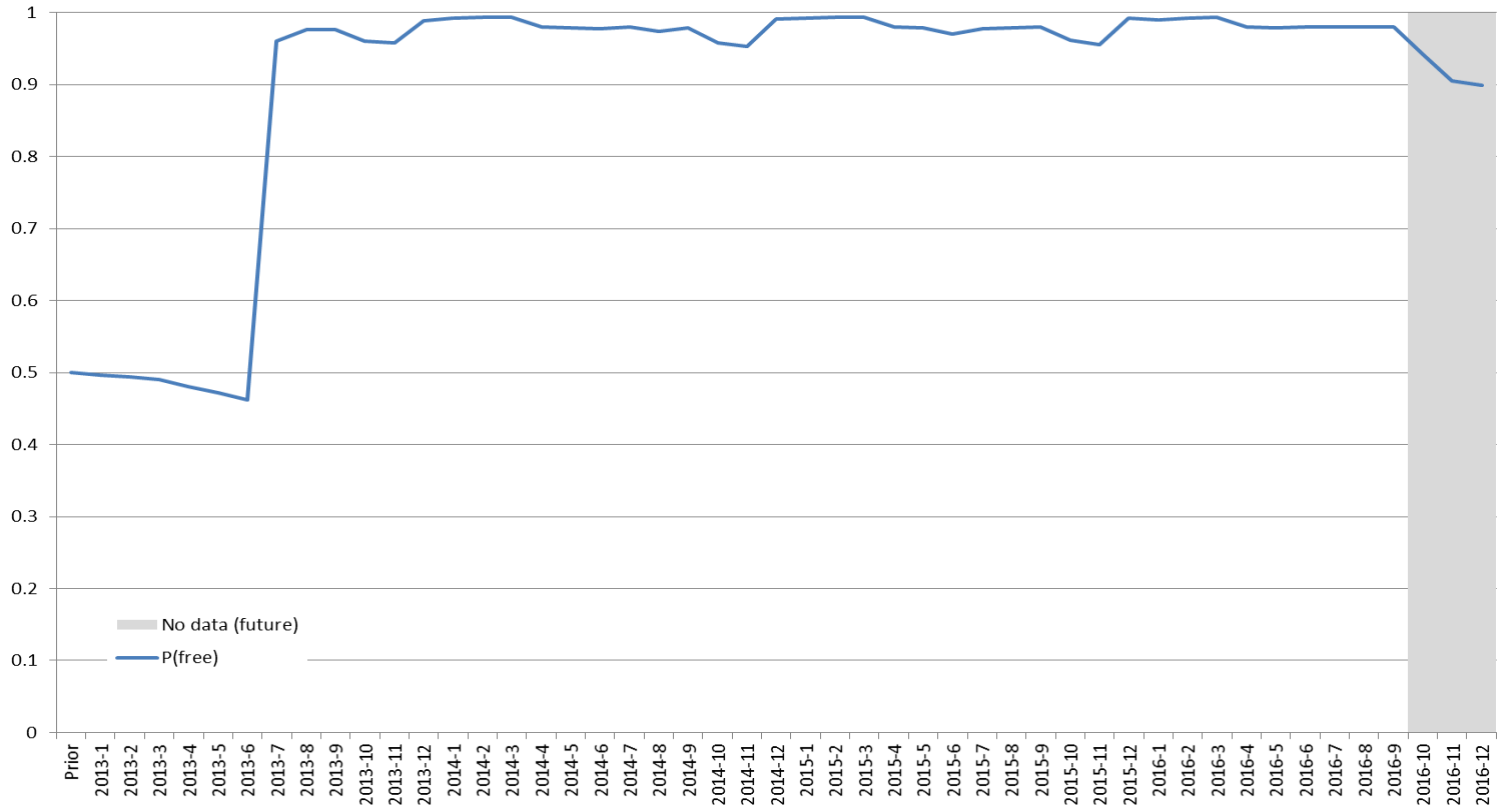


	A	B	C	D	E	F	G
1	Analysis of FMD surveillance data to demonstrate freedom from infection						
2							
3	Parameters						Key
4	Design prevalence values						User input
5	Herd level design prevalence	0.02	P^*_H				Calculated value
6	Animal-level design prevalence	0.2	P^*_A				
7							
8	Probability of introduction						
9	Annual P(intro)	0.02	annually				
10	Seasonal variation?	Yes					
11	Unadjusted monthly P(intro)	0.0017	monthly				
12	Monthly relative risk scores	Score	Adjusted P(intro)				
13	1	1	0.0007				
14	2	1	0.0007				
15	3	1	0.0007				
16	4	1	0.0007				
17	5	1	0.0007				
18	6	1	0.0007				
19	7	1	0.0007				
20	8	20	0.0129				
21	9	1	0.0007				
22	10	1	0.0007				
23	11	1	0.0007				
24	12	1	0.0007				
25							
26	Herd-level risk factor						
27	Risk factor name	Region	RR	PrP	AR	EPI	
28	High risk group	East	3	0.2	2.142857	0.042857	
29	Low risk group	West	1	0.8	0.714286	0.014286	
30							
31	Prior probabilty of freedom	0.5	Prior P(free)				
32							
33	Surveillance sensitivty						
34	Type	Combined	Sensitivity				
35	Serosurvey	0.92					
36	Passive reporting	0.2					
37	Abattoir	0.3					
38	Surveillance type 4	0					
39	Surveillance type 5	0					
40	Surveillance type 6	0					
41							



Greece

	Confidence of freedom
JUL 16	0.98
AUG 16	0.96
SEP 16	0.95



Current comments/shortcomings

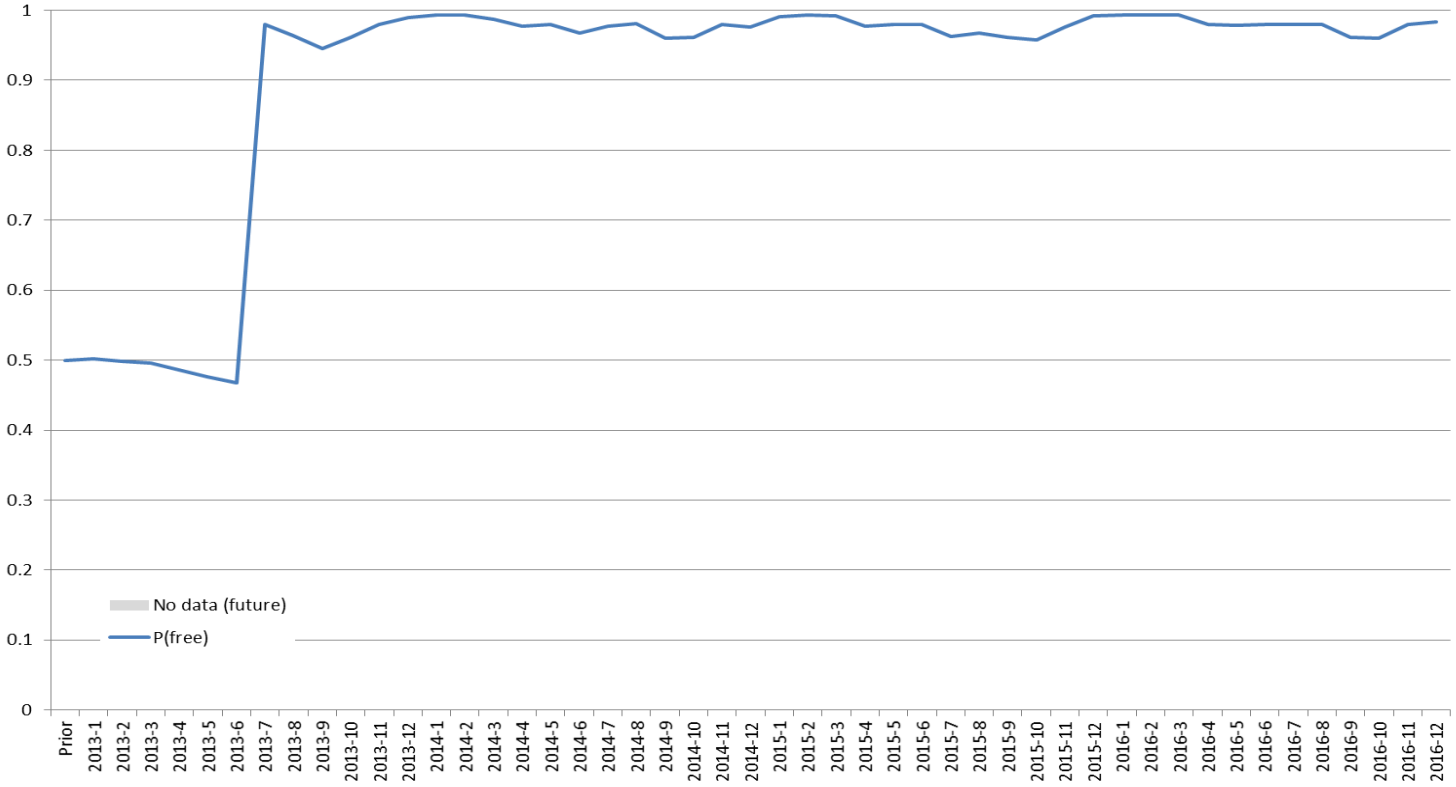
- Delays for the 4th cycle

- Data discrepancies between cycle reports and database:

a) Clinically examined
b) Serological samples (*below target)

Turkey

	Confidence of freedom
JUL 16	0.98
AUG 16	0.98
SEP 16	0.96
OCT 16	0.96
NOV 16	0.97
DEC 16	0.98



Current comments/shortcomings

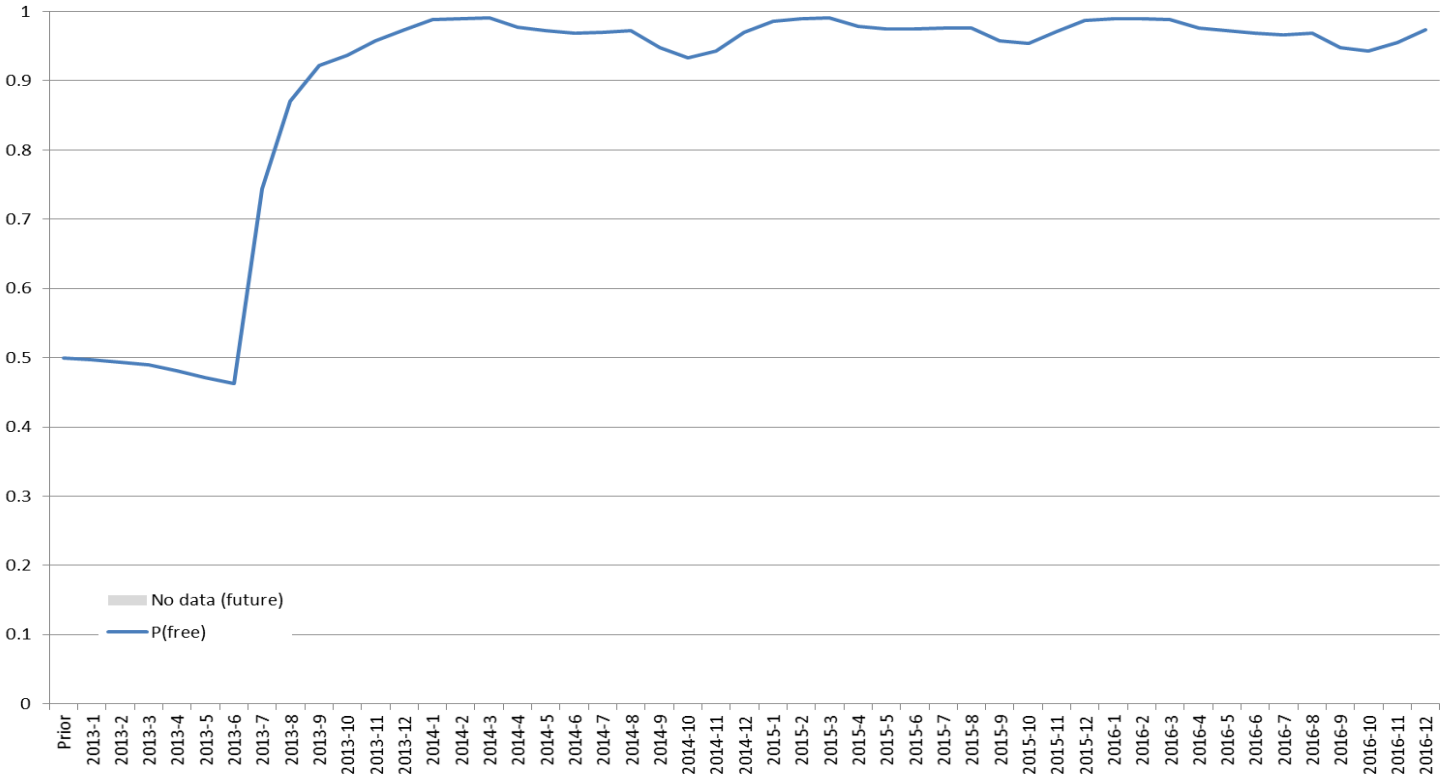
- Data discrepancies between cycle reports and database:

a) Clinically examined (*above target)
b) Serological samples (*below target)

- Clarification with number of epi-units (*breakdown?)

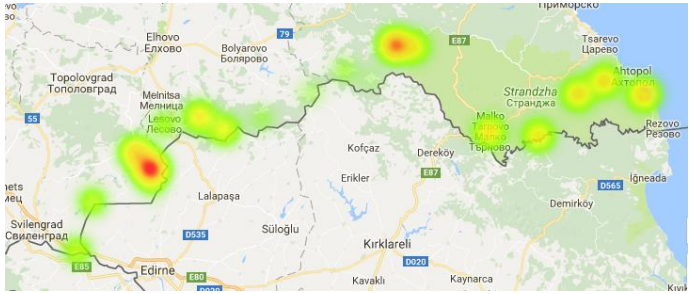
Bulgaria

	Confidence of freedom
JUL 16	0.96
AUG 16	0.97
SEP 16	0.95
OCT 16	0.94
NOV 16	0.95
DEC 16	0.97



Current comments/shortcomings

a) Serological samples (>90% target)

b) Timing of reporting

*Surveillance coverage