False alarm rate represents the proportion of negative events (e.g. non-outbreak periods) incorrectly classified as events (e.g.outbreaks). This is the inverse of the specificity but can be more easily understood than specificity.
To evaluate the Specificity/ False Alarm Rate of the system, consult the EVA tool, to re-design the system with the goal of decreasing false-alarm rate, read through the advice below.

	Surveillance design step	**Advice for improvement of FALSE ALARM RATE**
1	**Surveillance system**	
1.1	**Hazard**	
1.2	**Surv. Objective**	
1.3	**Geographical area covered**	
1.4	**Susceptible species**	
1.5	**Risk characteristics**	
2	**Components overview**	
3	**Target population**	
3.1	**Target species**	
3.2	**Target sector**	
3.3	**Sectors missed**	
3.4	**Geographical area covered**	
3.5	**Target criteria**	
3.6	**Percentage covered**	
4	**Disease suspicion**	
4.1	**Definition**	The less specific the clinical definition of disease is the greater the potential for false positives. Therefore try to ensure the working definition is clear and accurately identifies the hazard of interest.
4.2	**Obligations**	
4.3	**Notification procedures**	
4.4	**Actions upon suspicions**	
4.5	**Actions upon confirmation**	
5	**Enhancements**	
6	**Testing protocol**	Similar to “Sensitivity”, choose (in conjunction with those responsible for laboratory analysis) a suitable testing option for this component to achieve a low false alarm rate, considering factors affecting analytical and diagnostic specificity or specificity as well as costs.
6.1	**Type of test to be carried out**	
6.2	**Type of sample to be collected**	
6.3	**Pooling**	If the target unit is animal, then testing pooled samples will reduce the false alarm rate. If the target unit is a group of animals (such as a herd) then testing pooled samples will increase the false alarm rate (because it is associated with a lower herd-level specificity).

6.4	**Screening/first test**	Aim for a test with high specificity or use a confirmatory test with high specificity to rule out false positives. Ensure adequate quality assurance in the laboratory to avoid for example cross-contamination.
6.5	**Confirmatory/ second test**	Aim for a highly specific test. Also consider factors affecting diagnostic specificity such as training of field and laboratory staff, quality assurance in the field and in laboratories to avoid cross-contamination and the use of negative controls.
6.6	**Further details**	
7	**Study design**	
7.1	**Point of sample collection**	
7.2	**Selection of units**	
7.3	**Target unit**	
7.4	**Sampling unit**	
7.5	**Sampling design**	
7.6	**Number of units in the target population**	
7.7	**Sensitivity of the testing protocol**	
7.8	**Specificity of the testing protocol**	A testing protocol will poor specificity may result in more false alarms.
8	**Sampling strategy**	
8.1	**Sampling at the primary sampling unit (PSU) level:**	
8.2	**Sampling at the secondary sampling unit (SSU) level:**	
8.3	**Selection criteria WITHIN the population**	
8.4	**Risk-based allocation**	
8.5	**Sample size calculation**	
8.6	**Sample allocation at the primary level**	
8.7	**Sample allocation at the Secondary level**	
8.8	**Sample collection timeline**	
9	**Data Generation/ Sampling collection process**	
9.1	**WHO will collect the samples?**	The choice of staff can influence false alarm rate; limited skills in taking out samples may generate false positive samples, for example by cross contamination.
9.2	**HOW will samples be collected?**	The choice of how samples are taken can influence false alarm rate; a weak protocol may generate false positive samples, for example by cross contamination.
9.3	**WHEN/HOW OFTEN will samples be collected?**	Every sampling occasion is a ‘chance’ to get a false positive, so increasing sampling frequency will influence the false alarm rate.

9.4	**Training**	Appropriate training can reduce false alarm rate, in particular for hazards and sample handling procedures where there is a risk for cross-contamination, or where proper identification of samples is crucial.
9.5	**Follow-up**	Proper follow-up of positive cases is essential in order to eliminate the false positives.
10	**Transfer means**	
10.1	**HOW will samples be transferred?**	Transfer means will affect false alarm rate if time and temperature affect the risk that a sample may be falsely positive.
10.2	**WHEN/HOW OFTEN will samples be collected?**	
10.3	**Training**	
11	**Data Translation/ sample analyses process**	
11.1	**WHO will perform the analyses?**	
11.2	**HOW will samples be analysed**	
11.3	**WHEN/HOW OFTEN will samples be collected?**	
11.4	**Expected LOAD**	
11.5	**Training**	
11.6	**Follow-up**	
12	**Epidemiological analyses**	
12.1	**Are there any epidemiological DATA that need to be collected?**	
12.2	**WHO will perform the analyses?**	
12.3	**HOW will epidemiological analyses be performed?**	
12.4	**WHEN/HOW OFTEN?**	
12.5	**Training**	
12.6	**Data management needs**	
12.7	**Software needs**	
13	**Dissemination of results**	
13.1	**WHO will disseminate the results?**	
13.2	**WHO is the TARGET of dissemination?**	
13.3	**HOW will results be disseminated?**	
13.4	**WHEN/HOW OFTEN?**	
14	**Surveillance review**	
14.1	**Who**	
14.2	**When**	
14.3	**How often**