Annex 1 Worked example for calculating conservation importance and site action scores

Step 1: Scoring conservation and management measures

Country	Site name	Total percentage of Critical Site protected	Management planning status	Conservation action status	Overall assessment and reversed score (R_k)
Country X	Site 1	100%	comprehensive plan	substantial, but limited	High (0)
Country X	Site 2	35%	comprehensive plan	little or none	Medium (1)
Country X	Site 3	0%	plan, but not comprehensive	some	Medium (1)
Country X	Site 4	100%	no planning	little or none	Low (2)
Country X	Site 5	100%	comprehensive plan	substantial, but limited	High (0)
Country X	Site 6	0%	no planning	little or none	Negligible (3)

Step 2: Calculating conservation importance of the site based on the populations it qualifies for as critical site[1]

Critical Site	Common Name	Population	Season	Mean population at site (n_{ik})	Units	Mean population estimate (N_i)	$\frac{n_{ik}}{N_i}$	AEWA Table 1 status	Weight (W_i)	$\frac{n_{ik}}{N_i} \cdot W_i$
Site 1	African Skimmer	East & Southern Africa	winter	650	individuals	10000	6.5%	C1	1	0.065
Site 1	Great White Pelican	Eastern Africa	winter	1800	individuals	140000	1.3%	C1	1	0.013
Site 1	Gull-billed Tern	nilotica, Black Sea, E Mediterranean (bre)	winter	1200	individuals	38000	3.2%	A3c	3	0.095
Site 1	Madagascar Pond-heron	Madagascar	winter	0	unknown	4000	0.8%	A1b	4	0.030
Site 2	White-winged Tern	Africa (non-br)	winter	100000	individuals	3000000	3.3%	C1	1	0.033
Site 3	Grey-headed Gull	poiocephalus, C & E Africa	winter	100000	individuals	300000	33.3%	C1	1	0.333
Site 3	Grey-headed Gull	poiocephalus, C & E Africa	breeding	10000	breeding pairs	300000	10.0%	C1	1	0.100
Site 3	Little Egret	garzetta, Sub-Saharan Africa (bre)	winter	20000	individuals	350000	5.7%	C1	1	0.057
Site 3	Reed Cormorant	africanus, S, E Africa	breeding	6500	breeding pairs					

[1] Proportions for breeding pairs are multiplied a factor of 3. Populations not listed on Table 1 of the AEWA Action Plan (e.g. Reed Cormorant at Musambwa island) were not considered in the assessment.

Critical Site	Common Name	Population	Season	Mean population at site (n_{ik})	Units	Mean population estimate (N_i)	$\frac{n_{ik}}{N_i}$	AEWA Table 1 status	Weight (W_i)	$\frac{n_{ik}}{N_i} \cdot W_i$
Site 4	Great Cormorant	lucidus, C & E Africa	breeding	5500	breeding pairs	350000	4.7%	C1	1	0.047
Site 5	African Skimmer	East & Southern Africa	winter	1400	individuals	10000	14.0%	C1	1	0.140
Site 5	Rock Pratincole	nuchalis	winter	750	individuals	62500	1.2%	B1	2	0.024
Site 6	Garganey	SW Asia, NE Africa (non-bre)	non-breeding	1580	unknown	150000	1.1%	C1	1	0.011

Step 3: Combining conservation importance with the (lack of) conservation measures to rank sites for urgent measures

Site name	**Response score (R_k) from step 1**	$\sum \frac{n_{ik}}{N_i} \cdot W_i$ **from Step 2**	**Priority score (P_k)**
Site 3	1	0.490476	0.490
Site 4	2	0.047143	0.094
Site 2	1	0.033333	0.033
Site 6	3	0.010533	0.032
Site 1	0	0.202594	0.000
Site 5	0	0.164	0.000

The process has identified Site 3 as the most important site for further conservation action despite the fact that the overall response score is medium. The reason for this is that it holds very high percentages of the grey headed gull both during the breeding and non-breeding ('winter') seasons[2], however the site has no formal designation according to the data available. Should the site receive formal protection, it would reach a high score and would not be a priority for filling gaps in conservation actions.

It is also worth paying attention to the second and third sites on the list, i.e. Site 4 and Site 2. They have similar conservation value, but the priority score of Site 4 is more than twice as high as of Site 2 because there is no management plan and no conservation action at all.

The priority score of the fourth site Site 6 is close to the one of Site 2 reflecting a complete lack of conservation measures.

[2] There are two options to deal with populations occurring in more than one season. One option is to use the values for each population in each season. This would reward sites which are important for a population in more than one season. The alternative is to use only the highest proportion value for the population if it occurs in more than one season. This would eliminate the inconsistency between resident and migrant populations and would take into accont a population only once.