Priority Scoring of Guidance Principles Based on Attribute Scores

Glossary and formulas for the guiding principles. Each guiding principle is derived from the scores from the limiting attributes described in Table 1. ***Data*** indicates all data-limitations (i.e., # Types, Precision, Bias, Species ID, Spatial, Temporal). ***Resource*** indicates all resource-limitations (i.e., Time, Funding, Capacity, Analysts:Stocks). Values range from 0 to 3, with 0 being the lowest priority score and 3 being the highest priority score.

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| Guiding Principle | Description | Formula |
| Data training | Train on the collection and preparation of data for use in stock assessment. | avg(Data) {= 3 <3     →3    →avg(Data, Capacity) |
| Improve data | Improve the quality and/or quantity of data, to overcome one or more data limitation attributes (i.e., types, imprecision, bias, species-specific, spatial and temporal limitations). | avg(Data, Analysts:Stocks) |
| Local input | Consider including local knowledge for basic biological understanding and model specifications. | avg(Data){= 3 <3     →3 avg(avg(Data),avg(Resources)) |
| Analytical training | Increase the analytical capacity to undertake quantitative stock assessment through technical training. | avg (Capacity, avg(Data),  avg(Time, Funding, Analysts:Stocks)) |
| Simple methods | Consider applying simple analytical methods for producing quantitative stock status information (as an introductory assessment approach). | avg(# Types, Resource) {= 3 <3     →0    →avg(# Types, Resource) |
| Complex methods | Consider the use of more complex modelling options. | avg(Data) {= 3 <3     →0    →avg(3-avg(Data), 3-avg(Resource)) |
| Improve Mod. Specs. | Consider focusing on increasing the sophistication of analyses to improve data treatment and assessment model specification. | avgData or avgResource  {= 3 <3     →0    →avg(3-avg(Data), 3-avg(Resource)) |
| Static MMs | Consider using static management measures as an introductory management approach. | max(avg(Data), avg(Resource)) |
| Dynamic CRs | Consider using dynamic control rules updated by stock assessments instead of static management measures. | avg(3-# Types, 3-avg(Spatial, Resource) |
| Improve governance | Improve the governance and policy around the data, assessment, and management measures. | avgTime,Funding,Capacity  {= 3 <3     3    →avg(# Types, Species ID, Time, Funding, Capacity) |