

- Collaborate with the IAWN Steering Committee to develop a set of criteria, based on observable parameters and characteristics of a NEO impact risk, to be used to establish thresholds for action.
- The criteria may be graduated based on orbit-related parameters that determine probabilities for impact and estimated physical characteristics of the object of interest, among other things. The crossing of a threshold would trigger a specific set of actions by IAWN, SMPAG and other identified entities to begin work on preparations and recommendations for an actual, real-world, mitigation campaign. The thresholds might also be graduated, and actions could involve, on the part of IAWN, increased focus on observations of the object of interest and tasking additional assets to assist with observations, while SMPAG could begin working with specific space-capable entities to define a viable set of mitigation campaign activities to adequately address the real-world scenario.

Threshold Criteria

Examples:

- Threshold criteria statements should be concise and easy to present to the layman
- But also based on sound technical analysis that can be explained to a technically informed audience.

Threshold Criteria

After data collected and analysed has been adequately verified and validated, given the circumstances of the actual, real-world scenario:

- 1) IAWN shall warn of predicted **impacts exceeding a probability of 1%** for all objects characterized to be **greater than 10 meters in size**, or roughly equivalent to **absolute magnitude of 28** if only brightness data can be collected.
- 2) Terrestrial preparedness planning should begin when warned of a possible impact:
 - Predicted to be **within 20 years**,
 - Probability of impact is assessed to be **greater than 10%**, and
 - Object is characterized to be **greater than 20 meters in size**, or roughly equivalent to **absolute magnitude of 27** if only brightness data can be collected.
- 3) SMPAG should start mission option(s) planning when warned of a possible impact:
 - Predicted to be **within 50 years**,
 - Probability is assessed to be **greater than 1%**, and
 - Object is characterized to be **greater than 50 meters in size**, or roughly equivalent to **absolute magnitude of 26** if only brightness data can be collected