

## SIG Research Priorities

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| DATE                | As at 1 June 2015   |   |
| SIG:                | Coastal   |   |
| SIG CONTACT:        | Hilke Giles, Steve Urlich   |   |
| RESEARCH PRIORITIES | Ranking   | Priority  |
|                     | 1   | Develop nationally consistent frameworks (including determining core parameters and quality assurance) for both regional and spatially targeted monitoring (e.g. estuaries) that incorporates cost effective technologies |
|                     | 2   | Characterising the existing CMA by collecting appropriate data for establishing baselines.  |
|                     | 3   | Identify relevant and meaningful indicators to describe the state and condition and assess change over time of the coastal marine area (CMA)  |
|                     | 4   | Researching environmental thresholds and establishing appropriate and relevant limits and standards for stressors impacting on the CMA, including those derived from land-based activities                                |
|                     | 5   | Identifying the effects of stressors within both a spatial and temporal context. Understanding the synergistic and cumulative effects of multiple stressors and developing tools to manage these effects                  |
|                     | 6   | Identifying indicators and determining response of ecosystem attributes (e.g. biodiversity, biological and physical processes, water quality) to stressors (individual and cumulative)                                    |
|                     | 7   | Investigate processes to co-develop appropriate indicators and supporting monitoring programmes for Māori environmental frameworks  |
|                     | 8   | Provide lessons where mātauranga Māori and science have been used collectively to understand environmental issues – particularly with regard to coastal and marine management.  |
|                     | 9   | Determine the generality and applicability of currently developed indicators (such as, but not limited to, the Cultural Health Index) across the many hapu and iwi of Aotearoa  |
|                     | 10  | Develop support and continually improve systems that facilitate data exchange and dissemination among councils and communities  |
|                     | 11  | Predict and measure the impact of freshwater flows, loads and limits on the coastal receiving environment   |
|                     | 12  | Develop approaches for the enhancement and restoration of degraded environments in the CMA  |
| 13                  | Identifying and prioritising adaptation and mitigation opportunities that are feasible in a regional policy context |   |

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|                           | 14   | Investigate the application of novel technologies for environmental monitoring in the CMA  |
|                           | 15   | Delineating to what extent regional influences may interact with or further exacerbate effects associated with climate change (e.g. runoff and ocean acidification, coastal hazard risks, biosecurity) |
|                           | 16   | Forecasting the nature and extent of environmental changes in the CMA in response to global climate change. Identify ecosystems and areas that will be more vulnerable than others                     |
|                           | 17   | Investigate the feasibility and ecological implications of potential biodiversity offsetting in the CMA  |
|                           | 18   | Develop practical methodologies to recognise ecosystem services of the CMA   |
|                           | 19   | Contribute to an effective understanding of ecosystem based management (EBM) and its implementation  |
|                           | 20   | Investigating capacity for organisms and ecosystems to adapt to climate change   |
| <b>OTHER INFORMATION:</b> | <p>"Coastal SIG research prioritization May 2015"</p> <p>"Guiding coastal and marine resource management – draft strategic research goals and implementation roadmap" (May 2015)</p> |  |