

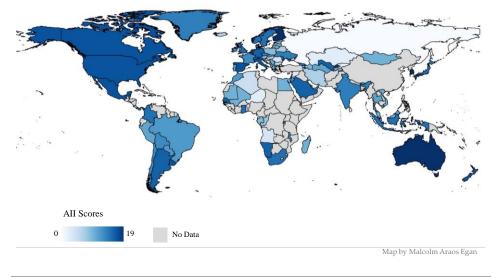
# **Global Adaptation Dataset**

The Global Adaptation Dataset captures **progress on adaptation** reported in the National Communications.

### Indicators:

- Type of action
- Vulnerability
- Sector
- Stage of implementation
- Stakeholders
- Implementation approach
- Vulnerable groups





# **Adaptation Initiative Index**

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# What drives national adaptation?

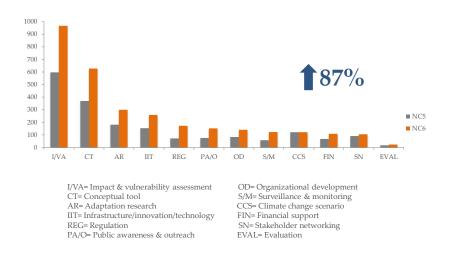
| Generalized linear model outcome:<br>adaptation initiatives index (AII)<br>Coefficient (Std. Error) | Model 1<br>(Exposure) | Model 2 (Exposure +<br>Economic resources) | Model 3 (Exposure +<br>Econ res +<br>Technology) | Model 4 (Exposure +<br>Econ res + Technology +<br>Info & skills) | Model 5 (Exposure +<br>Econ res + Technology +<br>Info & skills + Institutions | Model 6<br>(Best fit) |
|---|-----------------------|--|--|--|--|-----------------------|
| Number of observations  | 111                   | 111  | 111  | 84   | 79   | 98                    |
| Log likelihood (GLM)  | -313.70               | -309.16                                    | -307.75  | 235.20   | -213.19  | -262.10               |
| AIC (GLM)   | 5.71                  | 5.66                                       | 5.65   | 5.79   | 5.67   | 5.45                  |
| Adjusted R <sup>2</sup> (OLS)   | 0.11                  | 0.16                                       | 0.17   | 0.15   | 0.28   | 0.31                  |
| Exposure  |                       |  |  |  |  |                       |
| Global climate risk index   | -0.02 (0.01)*         | -0.01 (0.01)                               | -0.01 (0.01)                                     | 0.001 (0.02)   | <0.01 (0.02)   | -                     |
| Coastal exposure (% population, within 100 km of the coast)   | 0.03 (0.01)**         | 0.03 (0.01)**                              | 0.03 (0.01)**                                    | 0.02 (0.01)  | -0.001 (0.02)  | -                     |
| Economic resources  |                       |  |  |  |  |                       |
| Total population (log)  |                       | -0.06 (0.35)                               | 0.68 (0.57)                                      | 0.93 (0.85)  | 0.65 (0.86)  | 0.67 (0.30)*          |
| GDP (log)   |                       | 0.60 (0.27)*                               | -0.15 (0.53)                                     | -0.18 (0.77)   | 0.12 (0.71)  | -                     |
| Technology  |                       |  |  |  |  |                       |
| Internet users (per 100 people)   |                       | -  | 0.05 (0.03) <sup>M</sup>                         | 0.04 (0.04)  | -0.02 (0.05)   | -                     |
| Information & skills  |                       |  |  |  |  |                       |
| Public perception of climate change risks   |                       | -  | -  | 0.02 (0.03)  | 0.03 (0.03)  | -                     |
| Literacy rate (binary) <sup>a</sup>   |                       | -  | -  | 0.02 (0.04)  | -0.57 (1.44)   | -                     |
| Institutions  |                       |  |  |  |  |                       |
| Environmental sustainability index (Treaty component)   |                       | -  | -  | -  | 1.75 (3.98)  | 1.91 (3.00)           |
| Good governance (Corruption perceptions index)  |                       | -  | -  | -  | 1.39 (0.50)**  | 1.19 (0.25)*          |
| Environmental performance index (EPI)   |                       | -  | -  | -  | -0.08 (0.06)   | -0.07 (0.04)          |
| Constant  | 11.64 (1.14)**        | -3.48 (5.35)                               | 1.86 (6.22)                                      | -5.20 (8.94)   | -5.92 (9.15)   | -1.72 (4.91)          |

 $^a$  Binary: 0=<90 %, 1=≥90 %. Transformed to account for strong negative skewness

\*p<0.0, \*\* p<0.01

Source: Berrang-Ford, L., Ford, J. D., Lesnikowski, A., Poutiainen, C., Barrera, M., & Heymann, S. J. (2014). What drives national adaptation? A global assessment. Climatic Change, 124(1-2), 441–450.

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## **Observed change among high-income countries (NC5-NC6)**

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# Tracking urban adaptation

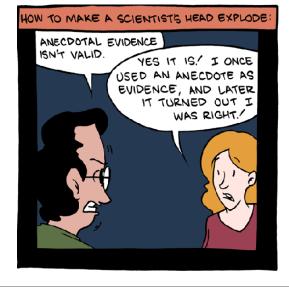
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Map by Malcolm Araos Egan

# What next?

Key challenges remain:

- Definitional
- Guidelines and verification
- Need for systematic reporting



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For more information find us at: www.trac3.ca

**TRAC3** was founded in 2014 to catalyze new research addressing conceptual, methodological, and empirical challenges associated with tracking global progress on adaptation to impacts of climate change.

We seek to:

- Clarify the concept of adaptation;
- Develop new methods of comparative analysis and hypothesistesting;
- Build comprehensive adaptation datasets that support complex research.



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