Not So Hypothetical:
Scenario planning for when Cyclone Yasi hits Townsville

Green Cross Australia is partnering with Townsville City Council to produce a “Cyclone Hypothetical” which enables the community to visualise and plan a response to a Cyclone Yasi-like event that hits Townsville directly. This is initiative is funded by the Queensland Government’s “Get Ready Queensland” program.

This project will involve business, emergency response, research and community leaders to cultivate shared responsibility for planning for such an event, which inevitably will occur.

The event builds on Green Cross Australia’s online disaster preparedness tools including an animation of such an event developed by CSIRO, using assumptions guided by Townsville City Council, Bureau of Meteorology and James Cook University experts.

Paul Barclay, Producer of ABC Radio National Big Ideas, will moderate the Cyclone Hypothetical, which will be showcased for national ABC radio and online audiences, and possibly ABC TV.

We will invite Mayors, business leaders and emergency response professionals from across Queensland coastal communities to attend the event in order to share insights from this initiative.

The program will be used in future to train Queensland emergency response professionals.

Cyclone and storm surge risks in Townsville
Townsville has experienced 53 major cyclones since the 1850s, including:

- TC Yasi in 2011
- TC Winifred in 1986
- TC Althea in 1971

When cyclones form over the open ocean, the combination of strong winds and low atmospheric pressure causes sea levels to rise higher than normal. When a cyclone moves towards land, this can cause great destruction. As the cyclone tracks towards the coast and the depth of the water becomes shallower, an ever-increasing surge of water, known as a cyclone storm tide or storm surge, causes coastal inundation and flooding.

To demonstrate how such a storm surge might affect a coastal city, CSIRO researchers worked with Green Cross Australia to create a model of Townsville that shows how quickly water can move and how soon it reaches low lying homes and businesses. The storm simulation shows a four-metre storm surge, the same as Cyclone Althea generated when it hit in 1971, arriving at the same time as a two-metre high tide mark.
The animation, produced by Green Cross Australia, can be viewed here and includes preparedness and community response advice from James Cook University, Red Cross and Volunteering Queensland. This project was shared with the Townsville Community during Cyclone Sunday in 2012 and is currently featured at the Museum of Tropical Queensland in Townsville.

Engaging local stakeholders in scenario planning
Disaster preparation, response and recovery involve a highly interdependent network of stakeholders including businesses and government agencies whose actions influence each other’s responses in often unpredictable ways. For this reason, it can be helpful to bring together diverse stakeholders as a form of scenario planning to anticipate situations and recalibrate response strategies.

The “Hypothetical” format of addressing situational responses offers a powerful and imaginative way of addressing how Townsville would respond to a direct hit from a Yasi-like cyclone. Over many years, Geoffrey Robertson, QC, has developed and hosted a series of discussions for ABC TV on social issues using a Hypothetical format – a compelling imaginary situation is created, and a selected panel of experts discusses its ramifications.

The Townsville event will be moderated by ABC Big Ideas Paul Barclay and will be created with high production values, enabling broadcast on the Radio National ABC Big Ideas program as well as television, and the program will remain accessible on the ABC website. Green Cross Australia has worked closely with the ABC and the ABC has an official disaster communications role, making this a natural production fit.

In this case the situation is not so hypothetical. The ability for Townsville leaders to interact with real-time scenario based challenges would be valuable not only to inform local planning, but also to influence similar engagement across other populated cyclone exposed regional towns in Northern Australia.

This format enables small business, retail, property, finance, telecommunications, and energy and water providers to develop scenario-based interactive responses alongside local political, community and disaster response leaders – to demonstrate what can go wrong in the preparation, response and early recovery phases of a major cyclone event. The Hypothetical format invites participants to play different roles, enabling people to see challenges from different perspectives. The community’s self-reliance will be tested.

Whereas the hypothetical itself will be a tightly choreographed storyline involving 8 to 12 carefully selected participants, the audience attending the event will be able to imagine their own responses under similar circumstances. To maximise the impact of this event we will host additional business and community events before and after the Cyclone Hypothetical including engaging with University students and local schools.

Many insights are gained from this style of situational planning method. In 2010, Green Cross Australia partnered with Property Council of Australia to produce a Cyclone Hypothetical involving CEO/Director level participants in Parliament House Canberra for an audience of 300 business leaders. Learn more about that event which addresses Southeast Queensland exposure here.

Why hold a Cyclone Hypothetical in Townsville?
Apart from the evident reality of Townsville’s cyclone exposure – producing this kind of event in Townsville for a national audience and large local audience makes sense because:

- Townsville is a leader in disaster resilience, having benefited from decades of consistent policy and practice improvements and a number of national-scale capacity building grants. A number of these tools and programs can be included as part of the background storyline development to enrich the program and lessons learned.
- Despite the tough culture of cyclone preparedness in and around Townsville, the local population turns over frequently. According to the ABS, Townsville’s population has increased by 2.6% over the past seven years and approaches 200,000, with 464 arrivals and departures per 1000 people (compared with 442 per 1000 nationally).
- The city’s current population has the potential to rise to between 270,000 (medium range forecast) and 380,000 people (boom range forecast) by 2031. Events like the Cyclone Hypothetical can be leveraged into the future through local education and engagement programs for years to come to embed a culture of preparedness as Townsville grows.
Examples of Townsville disaster resilience leadership programs and resources that can be leveraged through the proposed Hypothetical include:

- **Townsville Coastal Hazard Adaptation Strategy**: To assist councils to prepare a coastal hazard adaptation strategy, the Local Government Association of Queensland, Townsville City Council and the Queensland Government have finalised a [pilot coastal hazard adaptation strategy for Townsville](#). The project demonstrates how adaptation planning can be undertaken to avoid or mitigate the risks of coastal hazards for our coastal communities over the short, medium and long term, taking into account the projected impacts of sea level rise.

- **Community Resilience Project**: The [Community Resilience Project](#) in Queensland, funded by the National Disaster Resilience Program (2010-2011), focuses on Townsville and Rockhampton. The project seeks to improve disaster preparedness, response and recovery at both policy and practice levels by strengthening the engagement of people with a disability, their families and neighbours. [Find out more here.](#)

- **“Key to Business Resilience Tool”**: developed specifically for the Townsville region by CCIQ (Chamber of Commerce & Industry Queensland), Queensland Government, The North Queensland Small Business Centre, City of Townsville, Ergon Energy and Telstra, The Key to Business Resilience will provide businesses with vital information they can use in the event of a natural disaster. [Find out more here.](#)

- **Townsville District Disaster Management Plan**: This comprehensive plan demonstrates best practice in disaster planning. It was introduced in February 2013 is “a dynamic document that may be amended as required to incorporate legislative changes and lessons learned from activations during events.” [Find out more here.](#)

- **Townsville Tsunami Evacuation Guide**: This guide has been used to engage communities in low-lying areas – its 6 metre evacuation line is consistent with the methodology applied by CSIRO in developing the Green Cross Australia supported Storm Surge Animation. [Find out more here.](#)

- **Green Cross Australia’s Business Adaptation Network** (supported by the Queensland Department of Environment and Heritage Protection and Minister Andrew Powell) includes senior executive participation of highly engaged Townsville businesses including Ergon Energy, AECOM, Westpac, Stockland and Arup. Arup and AECOM have designed/engineered/planned key elements of Townsville’s critical health, transport and road infrastructure. Stockland has supply chain relationships with numerous small and medium sized businesses through their considerable retail and residential development presence in Townsville. Green Cross Australia’s strong relationship with Suncorp Insurance will underpin this event. [Find out more here.](#)

### Event logistics

The event will be produced either at the Townsville Q2 or Riverway Centre in front of an intimate audience of around 50 local and regional representatives.

Events planned around the Cyclone Hypothetical itself may include:

- University film night with panel discussion
- High School and emergency volunteer group talks by Green Cross Australia staff
- Displays at Stockland Shopping Centre
- Business reception hosted by Business Adaptation Network members
- Meeting of the Business Adaptation Network led by Ergon Energy to engage supply chain and emergency response partners from ICT, health, transport, water and food supply sectors.

This exceptional idea will greatly benefit not only the Townsville community but also leaders from other coastal Queensland locations who witness and participate in events surrounding the Hypothetical. Indeed, this event will be a world-first and will achieve global recognition in Australian disaster preparedness.