

# Change Within: The Key to Coastal Sustainability

Caroline Jackson  
Griffith Centre for Coastal Management Griffith University  
Gold Coast Campus QLD 4222

## ABSTRACT

BeachCare is a coastal community engagement program that undertakes dune regeneration activities on select Gold Coast beaches and foreshores. It is run through the Griffith University's Centre for Coastal Management with the support of the Gold Coast City Council. The BeachCare program has been in operation since 2005 and has targeted several sites on the Gold Coast that have been degraded due to vandalism, weed invasion, erosion or the lack of native dune vegetation. The involvement of the local community in dune planting and maintenance and a well managed program is vital to the success of the program.

The volunteer numbers have been increasing slightly each year; however these are still marginal results. As volunteers and their motivations are varied this paper looks at the barriers that are created within the organisation itself, and the bridges that can be crossed to overcome these to encourage more community involvement on a regular basis. Change is the key solution, change within the community and within the organisation of BeachCare. Changing the way an entire community perceives things is a large task, however it is achievable to change actions within the BeachCare program to influence and encourage more volunteer participation.

These tools aim to help not only BeachCare, but also other community based groups to attract and retain community members as volunteers. If successful the results will be a step towards achieving environmental sustainability, particularly along our vulnerable Gold Coast coastline, for now and for the future.

## INTRODUCTION to Sand Dune Vegetation

The dunes of the Gold Coast are fragile due to the high volume of urbanisation on the beaches, the geology of the long-stretched beaches, the large amount of weeds overriding the existing native dune vegetation and the fact that this coastline receives high surf and wave energy from both northern tropical cyclone swells and East Coast lows. Native dune flora species are important as they trap sand and stabilise areas of the beach usually landwards of the limits of the high tide zone. This effect creates elevated dune profiles and therefore acts as primary storm buffers or coastal protection barriers (GCCM, 2007). Unfortunately the dunes have often been put second place to the development of buildings on the beachfront, where uninterrupted million dollar ocean views have taken precedent over healthy dune ecosystems.

A healthy dune ecosystem consists of pioneer plants in the foredune, such as Spinifex grass, *Spinifex sericeus*, which is a grass that effectively traps and holds sand in a highly exposed environment. The mid-dune, often referred to as the scrub zone, consists of secondary plants, such as Coastal vitex, *Vitex trifolia*, which is a low lying salt tolerant

shrub, and the hind dune sits landwards of the previous areas as coastal heathland with tertiary plants such as littoral rainforest species Beach alectryon, *Alectryon coriaceus* (EPA, 2006).

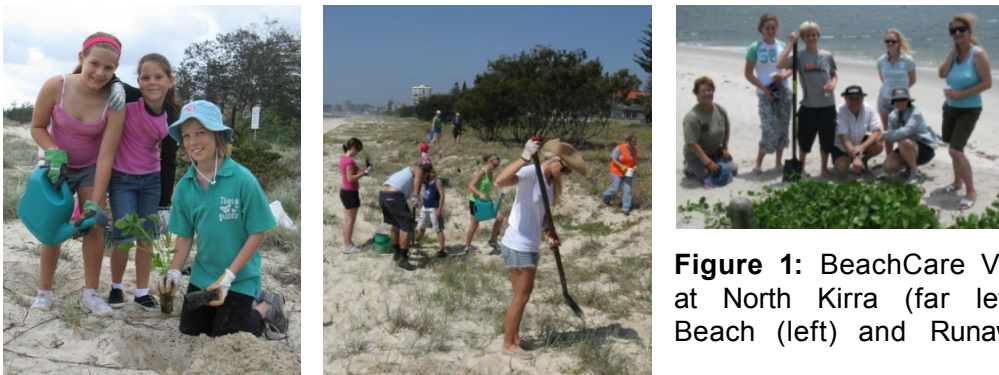
Vegetated dunes not only hold sand but they also act as a “bank”, holding a budget of sand for the beach which can be accessed during natural wave erosion occurrences. Without vegetation the sand is lost from the dunes, often carried away by the wind and causing the coastline to retreat landwards. However dunes that have been stripped of vegetation are able to recolonise, but if native plants are removed the faster growing exotic species will quickly fill the gaps and take over from the preferred native dune ecosystem model (EPA, 2006).

The colonisation history of Gold Coast beaches includes initial settlement as agricultural land to industrial growth from sand mining (often linked with dune vegetation burning). Soon beach orientated tourism became the focus of the area and now within the 21<sup>st</sup> Century the Gold Coast is growing into the fastest developing city on the coastline of Australia (ABS, 2004). All of these events and the associated population and development growth have lead to subsequent degradation of the native dune systems of the Gold Coast. It is now through programs such as BeachCare that the community, local businesses and the Gold Coast City Council can work on returning the beaches to resemble a healthy model of coastal sand dunes.

## BACKGROUND on BeachCare

BeachCare is a community based dune care program that was developed in 2005 to provide an avenue for the community to undertake regeneration and revegetation activities on the beaches and foreshores of the Gold Coast. This program is facilitated by the Griffith Centre for Coastal Management (GCCM) at Griffith University’s Gold Coast campus and is supported by the Gold Coast City Council (GCCC). Its focus is to improve the quality of the dune ecosystem, protect and plant native vegetation and as a result slow down the process of erosion on Gold Coast beach dunes. Whilst complying with South-east Queensland Regional Coastal Management Plan (2006), the BeachCare program aims to:

- Encourage community participation in caring for the local beaches (Figure1)
- Raise the community's awareness on beach management issues
- Encourage and assist in the development of self-run community BeachCare groups.

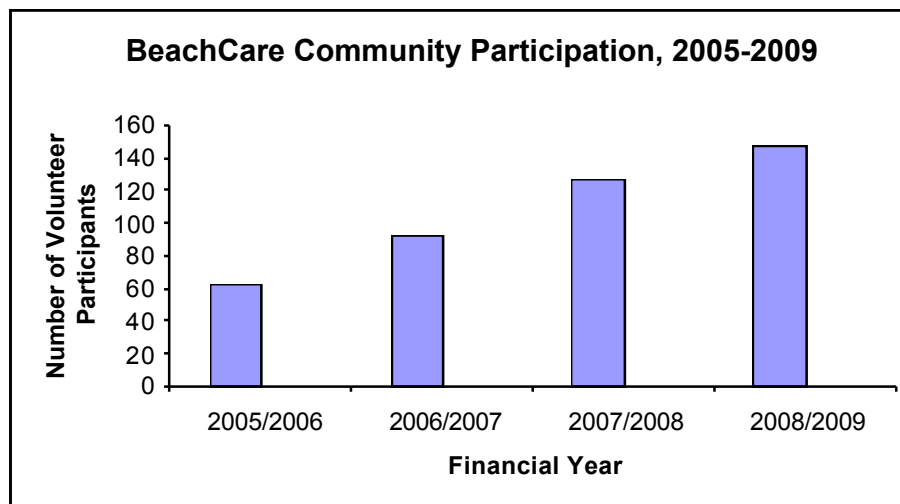


**Figure 1:** BeachCare Volunteers at North Kirra (far left), Palm Beach (left) and Runaway Bay

(above).

A variety of native species are planted in the dunes, these plants have been selected as they are successful South-East Queensland native dune plants and are in accordance with the plant species list within the GCCC Management of Coastal Dune Areas, Policy 15. There have been challenges faced with community concerns about tree heights on the dunes therefore the plants selected are mainly low-lying shrubs and beach runners. Several exotic weeds are also removed by BeachCare volunteers by hand following best practice removal techniques as advised by the GCCC Beaches and Foreshores Technical Officer and the Department of Natural Resources and Water.

Since the start of the BeachCare Program the number of volunteer participants has been steadily increasing every year, the following graph (Figure 2) shows the number of attendees at BeachCare since 2005. The average numbers of volunteers at an activity in 2008 was seven. It should also be noted that the year 2008/2009 still has six months remaining and numbers have already passed that of the previous year.



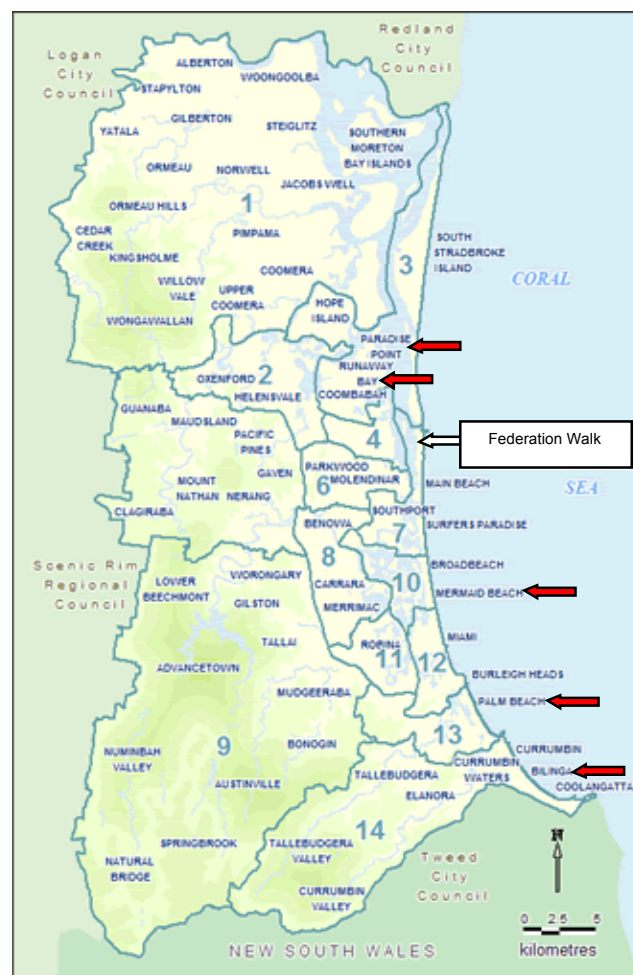
**Figure 2:** Community Participation Attendance at BeachCare Activities on the Gold Coast, from 2005-2009.

BeachCare is closely aligned with the GCCM Coast Ed program, which is also supported by GCCC to provide free educational services to school and community groups about the natural and built coastal environment of the Gold Coast. This program is a key component of the management of Gold Coast City's coastline. Dune planting with BeachCare is often included in CoastEd programs and over one thousand school children across the region have participated in CoastEd/ BeachCare activities that have occurred since 2002. These participation numbers have not been included in Figure 2.

The volunteers that attend BeachCare activities range in age, background and locality. A snapshot of a few volunteer types include local and newly established Gold Coast residents, retirees, families, university students and lecturers, primary and secondary school children and teachers (through the associated GCCM CoastEd program), Girl Guides, Conservation Volunteers Australia, the Surfrider Foundation Australia and there

is also attendance from Japanese foreign tourists involved in the BeachCare supported Surf Coach Program. The Australian Bureau of Statistics state that 34% of the adult population volunteer and the most common participating age group of volunteers in Queensland is between 35 and 54 years of age (VAI, 2007). The BeachCare coordinator is also involved in all GCCC dune contractor community days, another initiative developed within the management framework of Gold Coast City's coastline.

The five BeachCare sites are fairly evenly spread along the Gold Coast's coastline; from Paradise Point and Runaway Bay in the north, to centrally located Mermaid Beach, and then south to Palm Beach and North Kirra Beach. Federation Walk is a dune reserve that is located at The Spit and is often visited during CoastEd/ BeachCare activities, see Figure 3. These areas are targeted as they have been degraded due to vandalism, weed invasion, erosion or the lack of native dune vegetation.



**Figure 3:** BeachCare sites and the location of Federation Walk on the Gold Coast and the Gold Coast City Council Divisions they lie within. **Adapted from:** GCCC, 2008.

There have been four coordinators in this position (average one per year), all with university qualifications and/or previous horticultural experience. The high level of experience of the staff in this role provides the community with credible information on coastal processes and dune management.

## **METHODS and DISCUSSION on Change**

The BeachCare program has been built on a solid foundation. It is supported by an educational institution and the local city council, has well-established regular sites positioned along the Gold Coast beaches and experienced staff. It also benefits from other GCCC initiatives such as CoastEd. So why is it that the numbers of BeachCare volunteers, although increasing, are doing so at such a slow rate?

Experience shows that there is one key element that is pivotal to the success of this community based program that influences coastal sustainability and that is change. Change is required on many levels by many people, by the people of the community and by the people in the organisation who are running the program. Changing the way an entire community perceives things is a large task, however it is achievable to change actions within the organisation itself to influence and encourage more volunteer participation.

### **Organisation Change**

External factors aren't always the reason why the number of volunteers attending BeachCare average at around seven per activity. The coordinator and the organisation that run the program are largely responsible for whether the program is successful or not. Recruiting and retaining volunteers' takes time and effort and often the time available to do this is limited due to funding and resource restraints.

The most successful days have been reached when hosting largely publicised events such as Planet Arks National Tree Day; however very few of these volunteers will come along to a BeachCare activity after this day. Another successful strategy that requires minimal marketing is to target community or environmental groups like the Girl Guides, but again the regular community volunteer numbers are still low.

### **Major Barriers**

Several major barriers have been identified within the BeachCare Program that may impact on the number of long term volunteer participants.

- Volunteers are varied and motivations to volunteer are varied, therefore it is difficult to market the program to a wide and varied audience on a limited budget.
- The changing role of the coordinator potentially disrupts the BeachCare program. This could indicate that being a casual position, it is not attractive enough to keep staff more permanently in the role or that it is simply used as a career stepping stone for graduate students.
- There is a general perception that volunteer coordination takes minimal time to market, recruit and keep volunteers and that a successful program can be organised and reported on within a casual work week.

### **Bridges**

A successful means of overcoming these barriers is through the development of "bridges" that assist in encouraging change within the organisation to take place. The following actions have been identified.

- Volunteers must be recognised for their time and given gratitude for the tasks that they have done and shown the difference that they have made. Appreciation can be shown through giving them educational resources such as plant books, posters, stickers etc.
- Further appreciation can be provided through media outlets, publishing articles, and recognition through nomination for relevant awards.
- Offering training, designating roles and consulting with the volunteers on the running of the program is a successful way to give the volunteer a sense of achievement and worth.
- The role of volunteer coordinator should be given more credibility within the workforce. Volunteering gives \$42 billion dollars worth of value to the country (VAI, 2007). Without the time, effort and activities that are performed on the beaches of the Gold Coast how much would this cost GCCC and rate payers to do what the BeachCare volunteers do? What would the beaches look like?
- The co-ordinator should confidently sell the program within the organisation, to the manager, GCCC and to GCCM to encourage more support and time that may be required to make to the program more successful. It is very important to report and record the results of each activity to demonstrate what the program is achieving.
- The coordinator should positively visualise the success of the entire program, from receiving high numbers of volunteers on a regular basis to having more resources and time available to run the program successfully.
- There is a current opportunity for community based organisations to recruit more volunteers as the unemployment rate increases, volunteering can give people a chance to learn new skills, network to find employment or to use it as a stepping stone to get back into the work place.
- Ensure continuity of the program during coordinator position changes through allowing effective and adequate changeover time. This will assist the new coordinator in building repour with key community volunteers prior to taking on full responsibility of the role.

The above points identify actions that will promote change within the host organisation of the BeachCare Program and potentially lead to an increase in volunteer numbers and an improvement in retention. These actions will be developed into the BeachCare Program in the coming year. This will be further evaluated through monitoring the number of volunteers and assessing the level of retention.

## **CONCLUSIONS**

The future for community involvement on the Gold Coast beaches is a key strategy to protect one of the most fragile coastlines on the east coast of Australia, particularly with the threat of global warming and sea level rise facing our beaches in the years to come. BeachCare activities provide education, skills and promote sustainable living to a varied audience of volunteers. The more volunteers that attend activities such as BeachCare, the more benefits will be seen in the coastal environment as we strive to achieve coastal sustainability.

The BeachCare program is set to make changes within the organisation to assist in increasing the numbers of volunteers that participate in keeping the Gold Coast beaches native, stable and beautiful.

## TAKE HOME MESSAGES

Volunteers are so vital to keeping our coastal areas sustainable, yet volunteers and volunteer motivations vary and it is a challenging task to market a program to such a wide audience. However, it is achievable to increase volunteer participation by making changes within the roles and organisation of BeachCare and by the techniques used to value the volunteers' time and actions. What really is the environmental, economic and social value of volunteer programs such as these?

## ACKNOWLEDGEMENTS

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## REFERENCES

Australian Bureau of Statistics (2004). Household and Family Projections Australia 2001 – 2026. Catalogue 3236. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3236.0.55.003> 13 January, 2009.

Environmental Protection Agency (2006). Coastal Dunes – frontier to the sea. Retrieved from [http://www.epa.qld.gov.au/environmental\\_management/coast\\_and\\_oceans/beaches\\_and\\_dunes/coastal\\_dunes/](http://www.epa.qld.gov.au/environmental_management/coast_and_oceans/beaches_and_dunes/coastal_dunes/) 13 January, 2009.

Gold Coast City Council (2008). Gold Coast Region. Retrieved from [http://www.goldcoast.qld.gov.au/t\\_standard.aspx?pid=615](http://www.goldcoast.qld.gov.au/t_standard.aspx?pid=615) 16 January, 2009.

Griffith Centre for Coastal Management (2007). *Dune Vegetation Gold Coast*. Griffith University, Gold Coast.

Volunteering Australia Inc (2007). The Latest Picture of Volunteering in Australia. Retrieved from [http://www.volunteeringaustralia.org/html/s02\\_article/article\\_view.asp?id=2962&nav\\_cat\\_id=222&nav\\_top\\_id=50](http://www.volunteeringaustralia.org/html/s02_article/article_view.asp?id=2962&nav_cat_id=222&nav_top_id=50) 27 January, 2009.

### Short Biography

I am in my final semester of Bachelor Environmental Science in Coastal Management at Southern Cross University; to enhance my knowledge while studying I started volunteering in dune care at Federation Walk in 2005 and then in 2006 became a BeachCare volunteer. In July 2008 I took on the casual role of BeachCare Coordinator within the Griffith Centre for Coastal Management and have been active in the role ever since.