

VOLUNTEERS – CAN THEY MAKE A DIFFERENCE? THE VALUE OF VOLUNTEERS IN REHABILITATING URBAN BUSHLAND – SURVEY AND CASE STUDY

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Summary A survey was conducted for the 1994/95 financial year of all local government agencies and national park districts in the greater Sydney region to determine the number of volunteer bushland rehabilitation programs operating and the number of people involved in such programs. The value of these programs in economic terms is analysed.

A case study of the Lane Cove National Park Community Bush Regeneration Program is presented. The genesis of the program, recruitment, education and training, benefits to the Service and to the volunteers, are discussed.

INTRODUCTION

Urban bushland is a diminishing resource in terms of quantity and quality in the Sydney region. With the current trend in population growth and urban expansion, protecting and rehabilitating remnant bushland is increasingly important. The Sydney flora is one of the richest in Australia, with over 2500 native species and over 500 exotic species threatening its diversity (Carolyn and Tindale 1994).

Environmental weeds Volunteers in the Sydney region are predominantly engaged in reducing the impact of environmental weeds in remnant bushland. Environmental weeds have been variously described as weeds of bushland and plants out of place. The Sydney region hosts an estimated 20–30% of the total naturalized flora of New South Wales (NSW). Urban catchments are areas of high weed concentrations exceeding the average for the state. Environmental weeds can alter or permanently destroy ecosystems and modify species richness and abundance.

The management problems common to most remaining tracts of bushland in Sydney include fragmentation, isolation, high area to edge ratios, essential service incursions, uncontrolled storm water runoff, high nutrient loads and propagules present in storm water, rubbish dumping, weed invasion from areas in the upper catchment, garden escapes, flooding, changes in fire regime, theft of native flora, fauna, wood and bushrock, over-use or misuse of bushland, domestic and feral animals, and administration by multiple land management authorities with different management aims and practices. These

conditions encourage weeds to colonize and out compete native flora.

SURVEY RESULTS

Every week hundreds of Sydney-siders done a pair of work boots, hat and gloves and head off to meet like minded people to rehabilitate remnant bushland. One of the major activities carried out by volunteers is the removal of environmental weeds in or adjacent to bushland.

In 1994/95 there were 4787 volunteers working in 468 groups or individually in Sydney's bushland. Volunteers carried out 93 732 hours of work during the survey period, which is commercially valued at \$A2 062 104. Sixty four percent of volunteer programs commenced in the last four years.

Local government is leading the way in volunteer bushland rehabilitation with 77% of councils which contain bushland in their municipalities managing such programs (by late 1996, 85% of councils are managing volunteer programs). Sydney's national park districts are relative newcomers to volunteer bush regeneration programs, becoming involved during the last two years.

Volunteer activities In 96% of programs volunteers regularly undertake more than just weed control. Table 1 highlights the fact that a more holistic approach is being undertaken when rehabilitating bushland, whereas in the past volunteers and professionals were predominantly focused on weed removal. Volunteers are not only removing weeds, but are addressing the causes of the weeds, by investigating and tackling the impacts of storm water runoff, nutrient enrichment and rubbish dumping, they are assessing the wider environment by undertaking weed mapping and site assessments, flora and fauna surveys, and are involved in the active management and administration of programs through 'friends of' groups and management/advisory committees.

Promoting volunteer programs Ninety percent of organizations actively promote their volunteer program, see Table 2. Given the dramatic increase in new volunteer programs and volunteer registrations in the last four years extension programs are having the desired effect on the community.

Table 1. The major activities undertaken by volunteers.

bush regeneration	drain stencilling
weeding	flora/fauna surveys
tree planting	rare plant surveys
erosion control	flora and fauna lists
storm water works	mapping
weed spraying	workshops/training
fencing	fund raising
street and park tree planting	site assessments
coordinating volunteers	and strategies
water monitoring	newsletters
nursery work	clean-up days
seed collecting	community education
rubbish removal	herbarium collecting
administration	data collection
committee work	

Table 2. Methods of promoting volunteer programs.

letter box drops	community tree planting
field days	Bushcare Week
open days	'Adopt a Park' programs
catchment open days	display banners
street meets	display trailers
on-site promotion	annual reports
schools, TAFEs, Unis	newsletters
pamphlets	print media articles
direct contact	fliers in libraries and shops
info with rate notices	television
displays in	radio stories and promotions
libraries	interpretive bushwalks
shopping centres	on-site signs
council chambers	social events, BBQs
festivals	promotional videos

Geographic distribution of volunteers The geographic distribution of the volunteer bushland rehabilitation effort across the Sydney region is very uneven, being concentrated in a small number of municipalities. Six councils, representing 17% of all councils with bushland manage over 75% of volunteer groups, over 70% of all volunteers, and their residents contribute about 50% of all volunteer hours.

DISCUSSION

The results of this survey indicate that increasing numbers of Sydney residents are prepared to actively contribute to rehabilitating bushland.

In a survey conducted by Tein McDonald, a Sydney bushland rehabilitation consultant (personal communication May 1996), it was estimated that in 1991, 1000 volunteers were working in the bushland of Sydney's local government areas. Now with 4787 volunteers, this represents over a 450% increase in volunteer participation in four years. There was a 64% increase in new programs over the same period.

The six councils, representing 17% of all councils with bushland and which have 75% of volunteer groups, (socio-economic reasons may explain this) contain a high proportion of the city's total urban bushland resource. Ironically, these six council areas are all based on Hawkesbury sandstone and contain a bushland type which is the most comprehensively protected and conserved vegetation association in NSW. It is also one of the most diverse native flora assemblages in the country.

The remaining 29 councils manage the remaining 30% of volunteers. These more urbanized municipalities have much less of the bushland resource but paradoxically their bushland (e.g. Cumberland Plain

Woodland, Eastern Suburbs Banksia Scrub, Castlereagh Woodland) is often under greater threat of degradation and contains plant associations and species not well represented in Sydney's national parks or conserved elsewhere.

These council areas, particularly on the Cumberland Plain of western Sydney, should be encouraged to strengthen their volunteer ranks in an effort to better control threats to their irreplaceable urban bushland remnants as well as seek funding to conserve them using professional labour.

Government and land managers cannot deny the significant contribution of volunteers in managing bushland degradation, controlling invasive weeds and in improving the quality of urban life.

The people of Sydney have displayed strong and growing involvement and commitment in volunteering to rehabilitate degraded bushland. The long term success of their efforts are substantially dependent on government agencies meeting this increasing demand with appropriate resources and support.

CONCLUSION

Bushland rehabilitation programs and volunteer programs are expensive, labour intensive and require long term commitment. Land management authorities cannot make a significant impact on rehabilitating degraded bushland on the scale necessary to adequately protect its resources without community support, especially voluntary labour. Successful volunteer programs can enhance and complement existing weed management programs. By encouraging, resourcing and fostering volunteer programs, agencies can more effectively achieve their pest management and community education goals.

CASE STUDY: COMMUNITY BUSH
REGENERATION PROGRAM LANE COVE
NATIONAL PARK

Introduction In January 1994, bushfires burnt 83% of Lane Cove National Park. A public Lord Mayors Bushfire Appeal and substantial sponsorship from Westpac provided the funding to create the Community Bush Regeneration Program, which began in May 1994.

The park received much media attention following the fires which motivated the community into action. Over 150 people volunteered to help rehabilitate the park. However no infrastructure existed to manage these volunteers.

The Friends of Lane Cove National Park, (originally a small group of volunteer bush regenerators who had been working in the park for several years) was established as a community support group for post-fire recovery. The \$A330 000 donated to the park was used to establish a formal volunteer program to undertake post-fire bush regeneration over a three year period. The program is managed by two full-time staff.

Park description The park comprises 400 hectares situated within a major bushland valley in northern metropolitan Sydney. It is a relatively long, narrow, highly fragmented area of bushland occupying 10 km along the Lane Cove River. The Park is totally surrounded by urban development, with 2000 residential and commercial neighbours.

Approximately 25% of the park is severely degraded by weeds. Based on today's commercial bush regeneration rates it would take in excess of \$A15 000 000 to rehabilitate these degraded areas. Substantial funding is also required for storm water amelioration works throughout the park to help reduce the impacts of weeds.

Bush regeneration Urban weed control commonly involves managing many weed species. (Lane Cove National Park has over 200 weed species). Bush regeneration is the process of rehabilitating native bush from a weed infested condition to a healthy plant community composed of native flora.

The program The program fosters the development of community involvement and education in restoring degraded habitats. In the two years since the program commenced, volunteer membership has grown to exceed 240, with people working in 26 groups throughout the park. Most groups work on a regular site chosen by themselves or by the program co-ordinator. Each site is approximately 1.5 hectares. Groups work on a weekly, fortnightly or monthly basis.

Table 3. Value of volunteer contribution.

Volunteer hours	May 94–June 96
Bush Regeneration	HOURS – \$A
Total Hours	14 814.5
Commercial value @ \$A22 h ⁻¹	\$A325 919
Other hours	HOURS – \$A
Nursery and Administration	1164.5
Total Hours	15 979
Total value of hours	\$A351 538

A nursery is also managed by staff and volunteers. Endemic plants to the catchment are grown for re-vegetation programs within the park

Table 3 shows the total commitment of the volunteer contribution in hours and dollar value to the park during these two years.

The total expenditure to run this program for the two year period totalled \$A223 000. The commercial value of these volunteer hours at \$A351 538 represents a 157.6% return on investment. In today's economic climate, a return on investment of between 10–15% is considered good!

Training Community education is a high priority in the park, volunteers have the opportunity to participate in regular workshops and training courses, ranging from bush regeneration, weed ecology and weed identification, fauna identification and first aid. A quarterly newsletter is provided with volunteer input. All volunteers attend a four hour formal introductory training workshop which includes topics such as principles of bush regeneration, catchment management, occupational health and safety, and weeding techniques. This workshop is followed up by regular field based training. Volunteers are sponsored to undertake industry recognized training courses in bushland management with the National Trust, TAFE and community colleges.

Each group has a trained volunteer bush regenerator who acts as either trainer, co-ordinator or both, resulting in a highly trained and supervised volunteer work force. Neighbours in areas where volunteer sites exist regularly receive information on the program, and of the effects of human activities on the environment and how they can help reduce these impacts. This has led to greater recruitment of local residents and reduced common practices such as encroachments and dumping.

Volunteer benefits Volunteers develop personal satisfaction from doing something positive to help the environment. They meet new friends with similar interests, have physical activity and are provided with all tools and equipment.

Volunteers have the opportunity to see first hand how the Service manages its estate. Park management is firmly committed to fostering positive, ongoing relationships with the community. The program development and ongoing management involves regular consultation with the Friends of Lane Cove National Park and the coordinators of each group. Volunteers have a high level of involvement in all levels of the program's planning and development.

Benefits to the service This program has had a very positive impact on the local community and receives regular accolades from the public for its efforts in weed control. The program has maintained a high media profile which has assisted with recruitment and promotion. Opportunities have been created for Service staff to appreciate the needs and expectations of the community and to develop a collaborative relationship to conserve our natural and cultural heritage.

Consensus decision making between staff and volunteers has been actively encouraged to assist in developing a community sense of ownership of the program in the post-fire recovery of the Park.

The volunteer program complements and supports the overall District goal for weed management. This program actively provides opportunities for volunteers, staff, employment programs, students, the unemployed and Community Service Order workers, to be actively involved in bush regeneration and other operational activities within the program and gain valuable work experience.

CONCLUSION

Park administrators recognise the limitations of its weed management program and that weed control by its staff is not enough to control weeds on the scale necessary to adequately protect its biodiversity. By giving full support

to the Community Bush Regeneration Program and working collaboratively with the volunteers a significant impact has been made on reducing not only the weeds in the park but in many cases the causes of the weeds.

Whilst there is some evidence of the ecological impacts of environmental weeds, little is known of the social and economic costs and effects in urban areas. In the agricultural sector, it is estimated that weeds cost Australia over \$A3 billion per year in lost production and weed management programs.

Although a traditional bias towards agricultural weeds may still exist changes in emphasis are needed to protect Sydney's biodiversity from environmental weed invasion. Adequate funding needs to be directed towards the effective management of environmental weeds in addition to the funds directed towards weed management for agricultural production. For Lane Cove National Park, volunteers certainly do make a difference!

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REFERENCES

- Carolyn, R.C. and Tindale, M.D. (1994). Flora of the Sydney Region, 4th edition, p. 8. (Reed, Sydney).
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VOLUNTEER CO-ORDINATORS NETWORK – NATURAL AREAS

Information requested in the BUSHCARE SURVEY 1994/1995 Financial Year

Name: Organization and address.

Name of program: Number of years in operation, and number of years funding exists.

Total annual budget: Operations and salaries.

Staffing levels: Co-ordinators, trainers/tech officers both full time and part time.

Do you employ contract trainers? Budget allocation.

Bushland under your organizations care, control and management. Area (hectares).

Operations: Number of volunteers, number of groups and number of individuals (not in groups).

Total number of hours worked by volunteers 1994/95.

Commercial value of volunteer contribution at \$A22 h⁻¹.

Herbicide usage: What herbicide/s do you use? List registered name and volume used.

Community: Does your program extend to the wider community? Please specify (e.g. attend field/open days, hold displays in shopping centres, letterbox drops). List major volunteer activities e.g. nursery duties, administration help, data collection.

Comments:

Enquires: Lynn Rees 02 412 1811, Fax 02 411 6034

Please fax responses ASAP. Confidentiality assured. Total data of VCN used only, not individual organizations.
