



# PII NEWS

## March 2014

This summary of invasive species management activities undertaken by people and agencies that the Pacific Invasives Initiative (PII) works with is collated and circulated by the PII Team. Contributions are welcome. Thanks to all those who contributed to this one! Feedback is also welcomed - contact either the PII Team ([pii@aucland.ac.nz](mailto:pri@aucland.ac.nz)) or the people directly involved in projects. The views expressed by authors are not necessarily those of PII. Visit our website or find us on Facebook for more information.

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### PII ACTIVITIES

#### New on-line tool: Resource Kit for Invasive Plant Management

PII has launched a new on-line Resource Kit for Invasive Plant Management. A one-stop-shop, the resource kit offers a comprehensive range of information, best practice process and guidelines, templates of project documents and related worked examples to assist invasive plant practitioners with their work. For more information visit: [ipm.pacificinvasivesinitiative.org](http://ipm.pacificinvasivesinitiative.org)

While the focus of the resource kit is on Pacific Island Countries and Territories, it will also be useful to practitioners in other regions.

The resource kit was designed by combining current invasive plant management best practise with PII's direct experience of working with Pacific partners (government and non-government agencies). PII actively involved invasive plant specialists and Pacific practitioners throughout the development of the Resource Kit to ensure the content is both accurate and relevant. As we intend to keep the resource kit up-to-date, we would welcome contributions of new information. We would also welcome feedback.

An electronic off-line version of the resource kit can be obtained from PII on request ([PII@aucland.ac.nz](mailto:PII@aucland.ac.nz)).

PII has also developed a 10-day Invasive Plant Management Training Course in association with the Resource Kit. Contact PII ([PII@aucland.ac.nz](mailto:PII@aucland.ac.nz)) if you would like more information on the course.

Many thanks to all those who have helped us with information, advice or reviewing resource kit content.

The Resource Kit was developed thanks to financial support from the Critical Ecosystem Partnership Fund, the New Zealand Aid Programme and The David and Lucile Packard Foundation.



## PII Website has a new look

We are pleased to share with our friends and colleagues, the new look PII website ([www.pacificinvasivesinitiative.org](http://www.pacificinvasivesinitiative.org)).

We hope you like the clean look and easy navigation. We also hope that you will find it useful. The website tells you about PII and the services we provide. You can also find best practice resources, information on the three training courses we run and copies of all PII newsletters. It also shares with you the great work being undertaken by our partners. Your feedback on the website is welcome.



## PII signs Memorandum Of Understanding with Island Conservation

PII and Island Conservation (IC) have signed a Memorandum of Understanding (MOU) last January. The MOU reflects PII and IC's commitment to working together on the issue of invasive species in the Pacific island region. PII and Island Conservation share a common concern for the effective prevention, eradication or control of invasive species that pose a threat to Pacific islands ecosystems. Both organisations will therefore seek opportunities to increase resources and expertise available to Pacific Islands Countries and Territories to enhance their capacity to deal effectively with invasive species problems. Both organisations recognise that The Guidelines for invasive species management in the Pacific: a Pacific strategy for managing pests, weeds and other invasive species provide a robust framework for the development of national and regional invasive species programmes.

## Pacific Invasives Partnership Annual Meeting

The Pacific Invasives Partnership (PIP) held its 2014 annual meeting in Apia, Samoa from 24th to 28th February. The focus of the meeting was on:

1. Defining the elements for a regional project to be submitted to the set-aside funds (i.e. not country allocations) of 6th round of funding from the Global Environment Facility. The concept for the project was endorsed by SPREP members at their annual meeting last September. The project is led by SPREP in partnership with PIP partners and will be an important vehicle for further demonstrating the value of a partnership approach to the issue of invasive species and the saying that "together we can achieve better things"
2. Planning for PIP's on-going efforts on engaging further political support for biosecurity and invasive species management. Several opportunities have been identified and planned for including the Pacific Islands Forum Meeting in July in Palau, the Small Island Developing States Conference in September in Samoa and the World Parks Conference in November in Australia.
3. Review of progress on the previous year PIP Action Plan and preparation of this years' Action Plan.



PIP Members (Photo: SPREP)

The meeting was hosted by SPREP and chaired by Mr Josua Wainiqolo, Biosecurity and Trade Facilitation Coordinator, SPC's Land Resources Division.

The following PIP partners were present: BirdLife Pacific Secretariat, Hawaii AntLab/Pacific Cooperative Studies Unit, Island Conservation, Landcare Research NZ, Micronesia Regional Invasive Species Council, SPC, SPREP, Pacific Invasives Initiative, Pacific Invasives Learning Network, United Nations Environment Programme, US National Invasive Species Council.

## Pacific Invasive Plant Information Database

**BENJAMIN FITZGERALD**, PII Summer Student

The Pacific Invasive Plant Information Database (PIPID) was developed in 2012 as part of PII's Invasive Plant Management Training Course. The purpose of PIPID is to provide information on invasive plant species that are being worked on in the Pacific and the management methods used.

The first 29 plants entered into the PIPID were plants brought along by participants at the first four PII Invasive Plant Management Training Courses and which participants were working on managing in their countries.

Over the last 2 months as a summer studentship project, information has been collected to increase the number of species in the PIPID and to strengthen information on species already in the database. The PIPID holds important information and references on "environmental weeds" (invasive plants threatening native biodiversity), in the Pacific region. This includes information relating to management of the species, as well as species characteristics and phenology (the study of periodic plant life cycle events); essential elements for effective management and monitoring programmes.

The first step of this project was to produce an invasive plant inventory, essentially, these being the species currently of concern for agencies and people in the Pacific. To do this, information was collected from various sources which shared activities regarding invasive plants such as: National Biodiversity Strategy Action Plans, National Invasive Species Strategy Action Plans, PII Newsletters, PILN Soundbites, and reports on invasive plants on the Pacific Islands (Space et al. various). An important part of this step was to differentiate between species which are of environmental concern and those threatening agricultural practices.

The search returned nearly 400 species of concern, which were then prioritised, based firstly on environmental concern, their distribution across the Pacific

and their Weed Risk Assessment (WRA) Score. Information (e.g. characteristics, management methods) on the top 50 species were then researched further to strengthen the species profiles as much as possible.

The PIPID now holds over 50 species, and as well as 'best practice' guidelines for management, also details the various management practices taking place in different Pacific Island Countries and Territories. Some species have very little information regarding their characteristics and/or management methods, this highlights the need for further research on these species, and management methods to be documented and shared to establish or refine 'best practice' methods.

The PIPID will continue to grow as more species are added and species profiles strengthened as new information becomes available and management methods improved. The database will require Microsoft Access to run.

If you would like a copy of the PIPID and more information on the training course please contact PII ([pii@auckland.ac.nz](mailto:pii@auckland.ac.nz)).

PII is grateful to the University of Auckland for the Summer Studentship which provided funding for Ben to complete this work.

**Note from author:** All-together the project has been really interesting, giving me great insight into the complexities and issues surrounding invasive plant management. I have developed my own knowledge; hopefully making the database better equipped for invasive plant managers to develop effective and efficient management programmes

## PII SUPPORTED AGENCIES

### FSM-POHNPEI: Invasive Species Activities

**BEJAY OBISPO**, Conservation Society of Pohnpei

The Conservation Society of Pohnpei (CSP) wishes to share its progress on its invasive species management programme. CSP and its partner agencies are working together to fight the targeted species that were selected after the new strategic plan was updated last year (2013). Most of the target species are now over ninety per cent controlled within specific sites. The target species are false sakau (*Piper auritum*), chain of love (*Antigonon leptopus*), ivy-gourd (*Coccinia grandis*), Honolulu rose (*Clerodendrum chinense*) and purple trumpet (*Thunbergia grandiflora*).

Our new Strategic Action Plan (SAP) was completed on the 1st August 2013. This new SAP divides the targeted species into two categories; one for eradication, the other for control. The eradication list consists of the following invasive species, both plants and animals: false sakau, ivy gourd, chain of love, purple trumpet, Honolulu Rose and feral pigeon (*Columba livia*). The species targeted for control, both plants and animals are: mile-a-minute

(*Mikania micrantha*), Koster's Curse (*Clidemia hirta*), African tulip (*Spathodea campanulata*), tree sparrow (*Passer montanus*) crown of thorns (*Acanthaster planci*), eel catfish (*Plotosus lineatus*), milk fish (*Chanos chanos*) and tilapia (*Oreochromis mossambicus*).

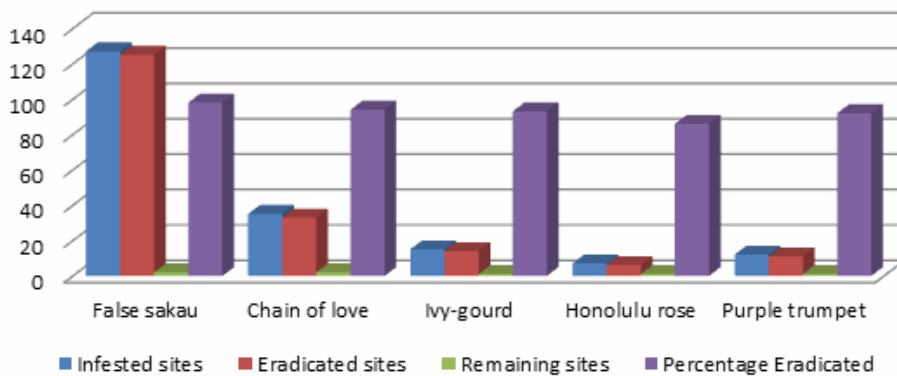
After our community awareness programmes (see PII News September 2013) about 90% of Pohnpei's population are now aware of our target species for management. This has had a positive result with the community helping to identify sites with the targeted species.

The Table below shows the overall summary of the invasive plant species activities since the beginning of the eradication program back in the year 2000.

Species	No. of know sites	% of sites removed
False sakau	127	98
Chain of love	35	94
Ivy gourd	15	93
Honolulu rose	7	86*
Purple trumplet	12	92

\*In the September 2013 edition of the PII Newsletter Honolulu rose was mentioned as 100% removed from known sites. However, since then Honolulu rose has been found again within the sites.

Target species



**Invasive Species Presentation to College of Micronesia (agriculture class) (L). Target Invasive Species Posters were distributed to two of the Paramount chiefs of Pohnpei and was discussed during the Traditional Summit (R).**

# French Polynesia: Impact of *Acridotheres tristis* and *Pycnonotus cafer* 2012 and 2013 control campaigns on the recovery of the critically endangered *Pomarea nigra*

CAROLINE BLANVILLAIN, SUSANA SAAVEDRA and THOMAS GHESTEMME, SOP Manu

This article follows on from an article that appeared in the December 2013 PII Newsletter (FRENCH POLYNESIA: Update - Second campaign to control *Acridotheres tristis* and *Pycnonotus cafer* on Tahiti Island, 2013)

The Tahiti monarch (*Pomarea nigra*), has only 46 individuals left in the world and is listed as critically endangered on the IUCN Red List. In contrast myna (*Acridotheres tristis*) and bulbul (*Pycnonotus cafer*) are listed in the 100 of the world's worst invasive alien species. It has been established that mynas have a direct effect on monarch chicks through predation, while bulbuls disturb breeding pairs and decrease the chances of chicks' survival. Of the 34 failures documented during incubated nests protected against rats, 35 % (12) were caused by introduced birds, 15 % (5) due to climatic event and 50 % (17) on unknown factors. It was evident that the control of invasive birds was necessary for the recovery of the monarch.

Tahiti monarchs are territorial birds, established in three valleys (Papehue, Maruapo and Tiapa) within the districts of Paea and Punaauia (west coast of Tahiti), they are seasonal breeders (from September until March).

Myna and bulbul control campaigns were undertaken from August to December in 2012 and 2013; using a network of trappers (69 then 32). In addition, shooting and poisoning using DCR 1339 was also used in monarch territories on a regular basis.

In 2012, 1695 mynas and 1040 bulbuls were removed from gardens located at the entrance of each valley. In 2013, about 741 mynas and 849 bulbuls were removed. Previously in 2011, with only shooting used to protect the nests, 11 mynas and 14 bulbuls were removed.

Between 2011 and 2013, introduced bird abundance was assessed in monarch territories using 10 minute point count and also by monitoring the number of individual present during the observation session (from 10 to 90 minutes duration). The results on in each valley are presented in Table 1.

In Papehue valley, bulbul and myna abundance decreased substantially after the first control campaign (2012), but the number of bulbul increased again despite the second campaign whereas myna decreased again and nearly vanished from monarch territories.

In Maruapo valley, myna number decreased but bulbuls numbers also increased again in 2013. In Tiapa valley, myna numbers also decreased

Myna and monarch interactions decreased in Papehue and Maruapo valleys. Bulbul and monarch interactions decreased in Papehue and Maruapo during but then increased again in Maruapo during 2013-2014 Interactions were always very low in Tiapa Valley.

Tahiti Monarch recovery is evident with the increase of pairs and fledgling observed recently. Between 1998 and 2008, only 52 % of the incubated nests produced fledglings. Since 2009 with the control of introduced birds 89 % of nests produced fledglings. This rate has reached 100 % thanks to the two introduced bird control campaigns in 2012 and 2013 but two post-fledgling young died during the 2013 breeding period in territories where interactions with bulbul were observed. Bulbuls breeding were also observed in the same area during the period when fledglings died. Despite the post-fledgling loss in 2013, the monarch recovery program was able to produce 9 to 10 chicks a year within the last two years (2013 breeding season is continuing until April 2014), very good results compared with the mean of 3.2 successful fledgling per year produced before.

The intensity of aggressive interaction also decreased, particularly in Maruapo and Papehue valleys where 2-3 bulbuls and one monarch were seen at four occasions falling to the ground, grasped all together (fighting), this was not observed again after the two control campaigns.

Those observations suggest:

- the effectiveness of the control campaigns implemented at the valley's entrances to remove myna from forest habitat
- the increase of *Miconia calvescens* (an invasive plant species that the bulbul feeds on) within the monarch territories further increases the attractiveness of monarch territories for the bulbuls.
- We suspect also that the rat control, performed on more regular basis in Maruapo upper valley since 2011 and the control of myna increase bulbul reproductive success, thus the increase in number of bulbul present in some monarch territories.

## Our conclusions are:

The control of mynas, in particular in the valleys, has decreased predation on Tahiti Monarch nests present in the valleys. The control needs to be continued in inhabited areas to prevent the re-colonization of the valleys.

Bulbuls may still have an impact on monarch reproductive success (through adult and chick aggression if they are too numerous), as bulbuls are more forest birds than myna, increased control needs to be implemented in the valleys to remove them.

Introduced bird control has increased the breeding success of the Tahiti Monarch.

Due to the critical state of the Tahiti Monarch, the introduced bird control campaign should be maintained yearly and improved for the best results. We also need to increase actions on Miconia control, especially in Maruapo valley with difficult access, to reduce food resources for bulbuls.

Authors wishes to acknowledge the support of the Government of French Polynesia, the European Union's, Preventing Extinction Initiative, the Critical Ecosystem Partnership Fund, the BirdLife Preventing Extinctions Programme, the French Ministry of Environment (SNB), Pacific Invasives Initiative, the Conservation des Espèces et Population Animales, the districts and mayors of Punaauia and Paea, and the local enterprises (Electricité de Tahiti, Office des postes et Télécommunication, Air Tahit Nui Magasine and Vini) for their financial help to the programme between 2011 and 2013. SOP-Manu also thanks the local NGOs 2D Attitude and Tamarii pointe des pêcheurs, for their great help in 2012.

**Table 1:** Abundance index, birds present and interactions observed during IPA or hours of observation in each valley

Valley and Periods*	Abundance index		number	Birds Present / hour		Hoursof observation	Interaction observed / hour	
	MM	BB		IPA	MM		BB	H
<b>Papehue</b>	<b>MM</b>	<b>BB</b>	<b>IPA</b>	<b>MM</b>	<b>BB</b>	<b>H</b>	<b>I/MM</b>	<b>I/BB</b>
<b>2011-2012</b>	0,51	1,15	137	0,83	2,48	91 h	0,06	0,72
<b>2012-2013</b>	0,14	0,87	92	0,17	1,18	27 h	0,04	0,49
<b>2013-2014</b>	0,01	1,61	71	0,01	1,86	18 h	0,00	0,45
<b>Maruapo</b>	<b>MM</b>	<b>BB</b>	<b>IPA</b>	<b>MM</b>	<b>BB</b>	<b>H</b>	<b>I/MM</b>	<b>I/BB</b>
<b>2011-2012</b>	0,99	1,80	75	1,42	2,58	35 h	0,11	1,30
<b>2012-2013</b>	0,65	2,38	88	0,76	2,58	25 h	0,08	0,41
<b>2013-2014</b>	0,49	2,96	55	0,67	3,27	18 h	0,05	1,26
<b>Tiapa</b>	<b>MM</b>	<b>BB</b>	<b>IPA</b>	<b>MM</b>	<b>BB</b>	<b>H</b>	<b>I/MM</b>	<b>I/BB</b>
<b>2011-2012</b>	1,14	0,21	29	1,55	0,69	19 h	0,00	0,00
<b>2012-2013</b>	0,29	0,29	21	0,62	0,62	14 h	0,00	0,36
<b>2013-2014</b>	0,30	0,20	11	0,80	0,50	7 h	0,00	0,00

## KIRIBATI: Yellow Crazy Ants in Kiritimati

ATA BINOKA, MELAD - Agriculture & Livestock Sub Division

Yellow crazy ants (YCA) (*Anoplolepis gracilipes*) were first detected on Kiritimati Island, Republic of Kiribati in early 2013 during the ant surveillance component of the Island Biosecurity Training Course run by the Pacific Invasive Initiatives (PII) and led by Monica Gruber of Pacific Biosecurity (Victoria University), together with Ray Pierce of EcoOceania. The only confirmed infested areas at that time were in the village of Ronton: Shipping warehouse, Commerce Office, Fisheries Office, CCH Motor Pool, Water Sanitation Office, Construction Unit and Power House. One worker ant was also found at the Inorganic Dumping site, but this may not have represented a nest.

Another surveillance was conducted recently on 28 February 2014 with Monica Gruber, where we confirmed the level of abundance is low compared to the previous year. This is possibly due to the dry conditions of the atoll over the last year. The surveillance covered the existing infested areas and also included Kiribati Port Authority and Inorganic Dumping site and confirmed that no YCA had established in either area.

### Common problems on Kiritimati

YCA has been seen to kill lizards, cockroaches and crabs. On Kiritimati we are concerned that YCA might spread to the seabird protected motus and wider in Kiribati, so we want to stop the ant before this happens. It is also a concern as it poses a threat to the endangered bokikokiko (*Acrocephalus aequinoctialis*).

### Spreading

A number of sites were reported by members of the public after they were made aware of the YCA infestation through the media and posters that PII produced. An Ag-

riculture Officer visited the reported sites and confirmed that no new places or areas have been infested with YCA. To prevent further spread of YCA to other parts of Kiribati, Biosecurity Officers in Kiritimati Island have increased awareness to the public to ensure no YCAs are transported by them. Biosecurity in Tarawa, the main island of Kiribati, has also tightened with their inspection of vessels and cargo from Kiritimati. Wildlife Officers in Kiritimati have also strengthened their inspection on boats prior to departure to remote islands.

### Management

In March 2013 the Wildlife Conservation Unit of MELAD assisted with flooding of YCA nests with the use of boiling and sea water which successfully destroyed them. Currently, media is being used to increase the public's awareness of the problem of YCA and to seek their assistance to report back to the Agriculture Department if they see the YCA. Consultations have been held with officers in charge of areas infested with YCA for their cooperation and support to stop any movement of items from their area to avoid the spread of YCA. Posters were erected in public places at different villages: Banana, Ronton, Tabwakea to raise awareness.

An Environmental Risk Assessment is being conducted to determine the safety of using pesticides on Kiritimati to control the YCA.

## REGIONAL UPDATES

### COOK ISLANDS: Project Becomes a Reality

QUENTIN PAYNTER, Landcare Research

New Zealand's Ministry of Foreign Affairs and Trade (MFAT) has agreed to fund a 5-year project to develop weed biocontrol for the Cook Islands, and the project is now underway. The Cook Islands comprise 15 islands; the largest being the well-known holiday destination of Rarotonga. A large number of plants introduced for their ornamental value, edible fruit, or timber have become seriously invasive, and are now threatening native biodiversity, traditional cultural practices, and the sustainable development of the island group. The programme of work for the Cook Islands was agreed in consultation with regional experts involved in agriculture, biodiversity conservation and biosecurity. After careful consideration the eight most appropriate targets were selected.

"Biocontrol agents developed elsewhere will be released against five species: mile-a-minute (*Mikania micrantha*), Noogoora burr (*Xanthium pungens*), grand balloon vine (*Cardiospermum grandiflorum*), strawberry guava

(*Psidium cattleianum*), and giant reed (*Arundo donax*)," confirmed Quentin Paynter, who is leading the project.

One of the first projects will be to gain permission to release a rust fungus (*Puccinia spegazzini*), which has already been released to deal with mile-a-minute in Papua New Guinea, Fiji and Vanuatu, and requires no additional testing. It is hoped releases of the rust fungus can get underway in the Cook Islands this calendar year. Some testing of another rust fungus (*Xanthium pungens*), used successfully in Australia against Noogoora burr, will be undertaken this year to check that it is safe to release in the Cook Islands and populations there are susceptible. No additional testing is needed for a third rust fungus (*Puccinia arechavaletae*) and a weevil (*Cissoanthonomus tuberculipennis*), identified as good potential agents for grand balloon vine in South Africa, where this weed is also problematic.

A scale insect (*Tectococcus ovatus*), recently released in Hawai'i for strawberry guava, appears to be sufficiently specific for the Cook Islands and we will import it into containment for final clearance for release in the Cook Islands in 2016. Next year we plan to import two insects developed as biocontrol agents for Giant reed USA, a gall wasp (*Tetramesa romana*) and a scale insect (*Rhizaspidiotus donacis*).

Novel research will be undertaken for the remaining three species: red passionfruit (*Passiflora rubra*), African tulip tree (*Spathodea campanulata*), and peltate morning glory (*Merremia peltata*). New agents will be developed for red passionfruit. We will import two attractive Heliconius butterflies into containment for host testing next year.

Agents will also be developed for African tulip tree, a major invasive plant throughout the Pacific Region. Potential agents were identified in preliminary surveys for biocontrol agents conducted in Ghana in 2009, funded by the Secretariat of the Pacific Community. Landcare's plant pathologist, Sarah Dodd, will assist collaborators from Rhodes University in South Africa to complete

additional surveys in Ghana next month. "Once all the potential candidates are known the best ones will be selected for host-testing," explained Sarah.

A molecular study of peltate morning glory will begin shortly to determine, if possible, how and when this plant colonised the Pacific region. There are conflicting views about whether this invasive vine is native or introduced to various islands, which needs to be resolved before any further steps can be taken to develop biocontrol for this target.

Throughout the project we will be working closely with Maja Poeschko of the Ministry for Agriculture in Rarotonga, and Gerald McCormack, who directs the Cook Islands Natural Heritage Project. We hope that this project, through the development of new agents and capacity, will in time also benefit the wider Pacific.

Many thanks to MFAT for providing the funds for this project through its International Development Fund. CONTACT: Quentin Paynter  
[paynterq@landcareresearch.co.nz](mailto:paynterq@landcareresearch.co.nz)

## Pacific Ant Prevention Programme: A regional approach to managing the continuing spread of invasive ant species in the Pacific islands region

**SOUAD BOUDJELAS, JOSUA WAINIQOLO, LESIO SAURARA and CAS VANDERWOUDE**

Invasive ants, once established, are very difficult to manage, let alone eradicate. Preventing new ant species from arriving and establishing in the Pacific islands region is the most effective management strategy. Species not present in the region, such as the red imported fire ant (RIFA) and the tawny crazy ant, are an ever-present threat to our islands. Meanwhile, the little fire ant, the yellow crazy ant and the Singapore ant continue to spread unabated through the region with devastating impacts on people, economies and biodiversity.

The little fire ant, now present in French Polynesia, Hawaii, Guam, New Caledonia, Papua New Guinea, Solomon Islands and Vanuatu, is a classic example of how invasive ants spread. Initially a single island is invaded and the ant becomes well established on the island. Subsequently, this initial invaded island acts as a 'source' for invasions of further islands. As more islands are invaded, so more 'sources' are created and the risk of further invasions increases.

This demonstrates the need for effective biosecurity not only at international borders but also within countries and between islands.

In 2003 Pacific Islands Countries and Ter-

ritories' (PICTs) expressed concerns about the growing risk of invasion by RIFA and called for assistance to stem this invasion. In response to this call the Cooperative Initiative on Invasive Alien Species on Islands (CII), in partnership with SPC, SPREP, NZ Ministry of Primary Industries (MPI) - previously, MAF Biosecurity New Zealand, US Department of Agriculture and several other partners, initiated the Pacific Ant Prevention Programme (PAPP). Later, in 2004 PII was established as CII's first regional programme.

The goal of PAPP is "To prevent RIFA and other invasive ant species with economic, environmental and/or social impacts, entering and establishing in or spreading between (or within) countries of the Pacific region". The focus is on enabling PICTs to take effective action against invasive ants through coordinated capacity development and provision of technical expertise.

The programme was institutionalised in 2006 at SPC's Land Resource Division following endorsement by SPC members in 2004; however, it is currently un-funded. With sufficient resources to implement PAPP, the region will avoid considerable economic and biodiversity loss and hardship for countries and communities in the region.

PAPP presents an unprecedented opportunity for agriculture and conservation interests to work together with international and bilateral aid entities at regional and country levels. This will enable them to build



much needed biosecurity capacity to give PICTs the protection they desperately need to prevent and address ant invasions which jeopardise agriculture, biodiversity and livelihoods.

Invasive ants can serve as a biosecurity “flagship” for all invasive insect pests, and strategies that prevent their entry and spread will likewise prevent many other invasive insect pests.

SPC and its partners are currently working together to re-energise PAPP and secure necessary funding for its implementation.



*Impact of little fire ant on people and crops  
(Photos: Cas Vanderwoude)*



**Pacific  
INVASIVES  
INITIATIVE**

Pacific Invasives Initiative, University Of Auckland,  
Tamaki Innovation Campus,  
Private Bag 92019, Auckland 1142, New Zealand  
Phone: +649 923-6805 | Fax: +649 373-7042 |  
E-mail: [pii@auckland.ac.nz](mailto:pri@auckland.ac.nz) |  
URL: [www.pacificinvasivesinitiative.org](http://www.pacificinvasivesinitiative.org) |  
Find us on Facebook