QUARTERLY PROJECT REPORT

Project Number:	D1.5 (TAP2)	Project Title:	WSC Modelling Toolkit
Project Leader/s:	Dr Peter Bach		
Report for Quarter ending:	FY1617 Q3, March 2017		

Progress summary

Key developments & overall summary of project status (~100 words)

A significant portion of the Toolkit's software development has been completed and progress is smooth on new features that will be the core focus of Q4. Training and adoption of the tool is also progressing quite rapidly in South Australia:

Software:
- Improvements to the Microclimate Module following feedback from South Australian partners have been made
- New user interface is now fully functional and a new way of creating and setting up projects has been coded
- Coding of new modules is underway and ongoing testing is being done

Module Development:
- A mock-up of a simple water balance module has been completed
- The software specification for the Future Climate module has been completed and is being implemented
- Final mathematical clarification on the economic valuation module is being obtained before its implementation
- Refinements to the extreme heat microclimate module have been made following feedback from partners

Case Studies:
- The WSC Toolkit has been applied to two South Australian case studies by CRC Partners DEWNR and NRM Board supported by Water Sensitive SA.
- A new case study was set up and created for the purpose of the training workshop in the WSC Toolkit: region of Mt. Barker in South Australia.

Publications
- A first draft of an overview paper of the WSC Toolkit has been completed and is being internally reviewed
- A first draft of the Future Rainfall Variability work has been completed and internally reviewed by almost all co-authors. Publication forms will be submitted shortly
- We have submitted an expression of interest to present the Future Rainfall Variability work to the International Conference on Urban Drainage in Prague this coming September.
- An article in Sustainability Matters has been published on the potential of the WSC Toolkit's Microclimate Module. Thanks for the efforts of Jamie Ewert for engaging a writer, the article featured an interview by CRCWSC Partner Mellissa Bradley and Project Leader Peter Bach as well as the outcomes of our application of the Toolkit in Unley City

Training Workshops
- This quarter, we held two training workshops of the WSC Toolkit hosted by the Resilient Hills & Coast Group, supported by Water Sensitive SA in Adelaide. Each workshop was attended by at least 10 participants
- New training workshops being planned in other states.

Summary of key findings for quarter (~100 words)

Some of the key findings from last quarter are becoming more prominent and are being reinforced by more hands-on application of the Toolkit. Major findings this quarter include:

- The new user interface and software architecture have proven to be a great success; many of the attendees of the workshop were able to easily navigate through the new user interface.
- The Extreme Heat Mapping module is showing a lot of consistency with the aerial flown heat mapping data that was undertaken in South Australia. Our partners at NRM have hired two assistants to test the Toolkit in two metropolitan area for which heat mapping data was available
- We have found ways of simplifying the accessibility and usability of the Future Climate data in the planning of the software specification of the Future Climate Module
- The Economic Willingness to Pay data can be subdivided into some key categories that would allow us to do

	represent it in the Toolkit
Please note that as part of the ongoing development and nearing final quarter of this project, the project team has identified some new risks or issues that can be anticipated in relation to the lasting legacy of the Toolkit. These are detailed in the table.	

Research utilisation (~100 words)
(Outline any know use or application, including trials / pilot studies, of research outputs by end users)

Water Sensitive SA (Mellissa Bradley) has offered to help with the adoption and utilisation of the WSC Toolkit in South Australia. DEWNR (Alex Ward) and NRM (Sam Phillips, Zafi Bachar) have been actively engaging their staff to help local practitioners with microclimate heat mapping work. They are actively using the Toolkit in a number of projects.

Summary of key communication and stakeholder engagement activities (~100 words)
(Note that details must be reported in sections below)

Two one-day training workshops were held this Quarter in Adelaide. The first one was held in Adelaide city, the second in the regional town of Goolwa. The training workshops were well attended and well-received. A training workshop for Perth is being planned together with Emma Yuen, Sonja Davidson and Naomi Rakela at the moment. This workshop will take place on April 28th. A fourth Melbourne-based training workshop is being planned with James O'Connor (City West Water) for either late May or June.

The Toolkit has also been presented at an Adaptation Practitioners Meeting in Adelaide, where a follow-up on the developments was undertaken. An article in Sustainability Matters has been written and published about the potential of the WSC Toolkit. Mellissa Bradley and Project Leader Peter Bach were interviewed for this article.

The user guide is currently being updated with new screenshots to reflect the new user interface.

Key Issues or Risks Anticipated	Risk Management Activities
Securing ongoing stakeholder engagement on the WSC Toolkit development and adoption	There is a lot of momentum at the moment and a big push for the use of the Toolkit, particularly in South Australia. There is no doubt that a similar momentum may start building up in both Victoria and Western Australia. At the moment, we are keeping in close contact and providing ongoing support to stakeholders. Providing access to the software has also greatly helped and the newly revamped software architecture has also increased the ease of use, meaning that stakeholders actually install and OPEN the software as well. Supporting documentation is quite well tested and the abundance of case studies from different Australian states ensures familiarity by users of the local context. This support needs to continue even once the project finishes!
Continued support on the development of the WSC Toolkit with the inclusion of new CRC Research into new modules and the update of existing modules	The WSC Toolkit project has proven a very useful avenue for providing stakeholders access to new CRC research. The redesign of the software architecture has been undertaken to enable better inclusion of new research into the Tool. The tool is very module and can be expanded with new research as it becomes available. This should give many CRCWSC researchers the ability to package simple algorithms relating to their research into usable widgets. For the software.
Maintaining accessibility and flexibility of the tool	We have observed that stakeholders like to 'play' with the tool 'in their own time and on their own computers'. The WSC Toolkit is built as a simple-to-use and light-weight desktop application. This has proven to be the best format for the WSC Toolkit to date. We anticipate that by maintaining this, it ensures familiarity of stakeholders and ease of access by stakeholders.

Milestones and deliverables

Project milestones and deliverables (from Project Agreement and FY15-16 Annual work plan where relevant) (do not include completed deliverables from previous financial years)	Project Agreement milestone due date	Annual work plan FY15-16 milestone due date	Status update and list any actual outputs (excluding publications) (provide detail and justification for over or under delivery, budget issues etc.)	Management response (please comment on how any delivery delays or issues are being managed)	% complete	Status* ☺ ☺ ☹
Report on initial WSC Toolkit case studies (including lessons and industry feedback) and development status	Dec 2015	n/a	Initial internal reports have been completed and sent to stakeholders documenting the status of both case studies.	-	100%	☺
Deliver at least 2 seminar and/or training workshops each year on testing and application of the WSC Toolkit version 3 beta	Feb 2016	n/a	Training material has been delivered, a workshop is scheduled for November and extensive promotion on the Toolkit's status and development has been undertaken over the last financial year	-	100%	☺
Product development plan workshop with CRCWSC participants and end-users (the outcomes from this workshop will inform the project scope for FY16-17, resource requirements, industry collaboration opportunities and relationship with tranche 2 needs)	March 2016	n/a	Workshop was held in Brisbane for all Tools and Products of the CRCWSC. Outcomes include a new program under which a more central marketing and communications strategy can be developed	-	100%	☺
Release WSC Toolkit version 3 beta (for testing) – with supporting documentation	June 2016	n/a	Version was delivered including a user manual	-	100%	☺
Report on WSC Toolkit case studies and development status	Dec 2016	n/a	Software architecture revamp completed, new modules specifications mostly complete, only coding and testing of new modules remain. Success of City of Unley case study has been published in the Sustainability Matters article and	**Although there are no delivery delays expected, an issue raised in Q2's report is the financial resource available for software development. Project D1.5 began with an approximately $10,000 deficit due to software development**	70%	☺

			has led to many more emerging case studies of the Toolkit.	**fees that were incurred in former project D1.1 by previous project lead that had to be back-paid using D1.5's first year of software development funds. This has never been rectified as the deficit was not allocated to D1.5's second project year. As such, there may be resource constraints on fully delivering the software.**		
Deliver at least 2 seminar and/or training workshops each year on testing and application of the WSC Toolkit version 3.1 beta	Feb 2017	n/a	Three training workshops in total have been delivered so far and two more workshops are being planned. Two workshops, in particular, have been delivered on the newly revamped version of the Toolkit. We are over-delivering on this objective.	-	100%	☺
Release WSC Toolkit beta version 3.1 – with supporting documentation	Dec 2017	n/a	The beta version is being issued to beta-testers and interested partners, who want to test the tool. It is also being used in a real setting by our SA Partners. As such, the release of the final version is gradual and supported by partners. Improvements will be made to software usability in addition to developing the other modules until project conclusion.	Meetings with programmers are streamlined and user feedback is continuously sent to our programming team.	60%	☺

* ☺ - on-track to meet milestone as per agreed timeframe and budget ; ☻ - unlikely or not on-track to achieve milestone by agreed timeframe and budget; ☹ - will not achieve milestone by agreed timeframe and budget

Overall Project Status	☺

Communication, stakeholder engagement and adoption activities

Formal publications - peer reviewed *PUBLISHED* in this quarter.* - *includes books; book chapters; articles in scholarly-refereed journals; full written conference papers (refereed proceedings)*		
Publication Type *(choose from list above)*	**Reference** *(Harvard Style)*	**Request to publish form submitted. Y/N**
	In preparation…	

* Please attach a copy of manuscript / final content if available

Publications and reports for end-users - CRSWSC technical and project milestone reports and other end-user publications and communication products **FINALISED** in this quarter - *includes technical or milestone reports; end-user report or guideline; synthesis report; newsletter articles, industry notes, fact sheets, audio-visual materials (videos, CD-ROMs, DVDs), flyers, presentation materials, booklets, computer programs, blogs, websites). Aimed at transferring know-how or practical information for end-users.*				
Publication / product type *(choose from list above)*	**Reference (if applicable) or author/s**	**Other details** *(description, publisher, web address, location)*	**Status** *(in draft; in press/review; published/final*)*	**Request to publish form submitted. Y/N**
Flyers				
Presentation				
Software				
Poster				

*if published / final – please attach a copy

Communication and stakeholder engagement activities

- *includes seminar / workshop; conference; meeting; research synthesis activity; training, education or capacity building; RASC; SASC; Project User Group; other)*

Date	Location	Type *(choose from list above)*	Activity details and purpose	Key attendees and organisation *(list name and organisation where possible)*	# of attendees	Host / organiser *(CRCWSC or other - specify)*
20/3/17	West Torrens Council Depot	Meeting	Adaptation Practitioners Meeting – opportunity to promote the WSC Toolkit Modelling to broader range of SA Stakeholders	Mellissa Bradley (Water Sensitive SA), Zafi Bachar (DEWNR/NRM)	~20	City of West Torrens
22/3/17	LGA Association, From St. Adelaide SA	Training Workshop	Teaching the WSC Toolkit's New User Interface, project workflow and how to model extreme heat microclimate using the case study of Mt Barker	Mellissa Bradley (Water Sensitive SA), Alex Ward (DEWNR), Kathy Hayter (Resilient Hills & Coast), etc.	~10	Resilient Hills & Cost / Water Sensitive SA
23/3/17	Alexandrina Council Building, Goolwa, SA	Training Workshop	Teaching the WSC Toolkit's New User Interface, project workflow and how to model extreme heat microclimate using the case study of Mt Barker	Kathy Hayter (Resilient Hills & Coast), attendees from a range of disciplines including engineers, landscape architects, strategic planners	12	Resilient Hills & Cost / Water Sensitive SA

Project personnel; financial resources and grants

Project personnel changes

- includes new, exiting and change of details for this quarter

Title & Full name	University / Organisation, Faculty / Department)	Position	Date (Start / Exit)	Phone	Email	FTE (full-time equivalent)	Cash funded/in-kind

New and graduating students for this quarter (PhD & Masters, or other Postgrad)

* if graduating, please provide details of graduate employment destination (if known)

Full name	University, Faculty / Department	Thesis topic (if known)	New – start date Graduating – end date	Student contact details *(Phone / Email)*	EFTSL or FTE**	Cash funded; top up or in-kind	Supervisors *(including organisation)*

**(equivalent full-time student load or full-time equivalent)

New financial assistance / grants for quarter

- *excludes funds from CRCWSC participant contributions*
- *includes those awarded by Commonwealth/state/territory government sources or agencies*

Grant Title	Granting Body	Date Awarded	Total Grant Amount $	Period of Grant (financial years)	Amount per Financial Year

Other project highlights / activities

Item	Details
New intellectual property (Centre IP)- identified	
Regulatory activities undertaken or completed	
Awards and acknowledgements	

Checklist for quarter

Progress summary report	X
Report on milestones and deliverables	X
New formal publications	X
New publications and reports for end-users	X
New communication & stakeholder engagement activities	X
New and/or departing staff/students	X
New financial assistance/grants	X
New other highlights for quarter	X

I confirm that the information in this report is correct and updated for the quarter.

Signature of Project Leader: Peter M. Bach

Date: 11/4/2017

Approved by Program Leader:

Date: