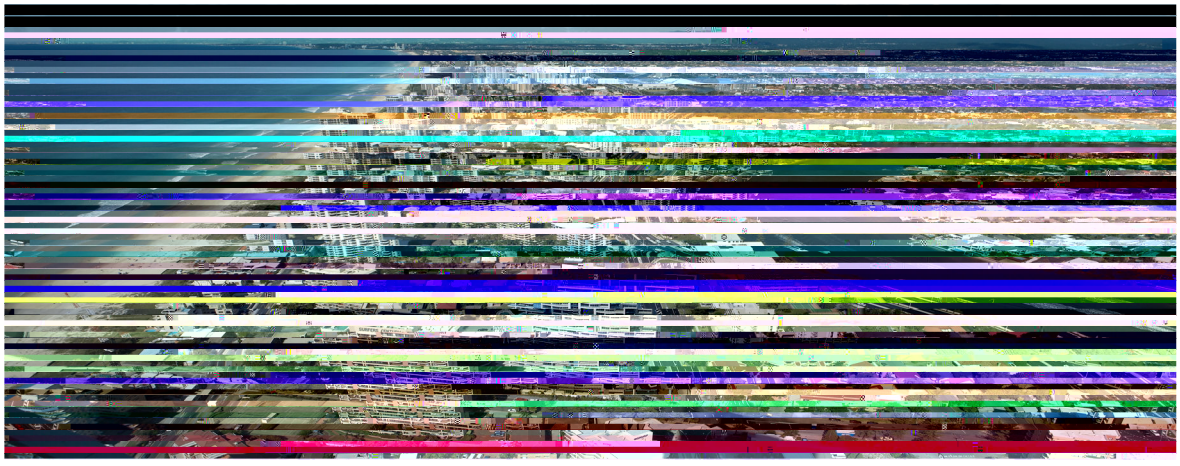
Australian Climate Change Adaptation Research Network for Settlements and Infrastructure

2nd National Forum and Workshop for Early Career Researchers

The University of New South Wales, Sydney
9, 10, 11, November 2009



ABSTRACTS

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Mo n d c on c n on

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he Q eens d co st ine i e ner e to incre sing se e e co p ed ith

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Title: ***d n c c n d c o co***
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A tho gh po icies descri ed specific y s for d pt tion to c i te ch nge re

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here re gro ing concerns ong A str i n co st re s ith respect to the ris s ssoci ted ith se e e tre es r nging fro c t strophic tropic cyc ones in North Q eens nd to ide spre d stor tides in o th A str i hese re in ter s of the effects of incre sing n ers of se ere e ther e ents nd the e idenced se e e rise t cce er ted r tes d e to g o ing As co st pop tion gro s nd the de e op ents incre se in sc e nd density these ris s eco e ore thre tening Acco od tes ey infr str ct re nd proposed or ind stri nd residenti de e op ents Port Ade ide s position nd its co st n t re s ect the re to gre t de of ris fro stor s rges i p cted y se e e rise

his PhD rese rch e ines the co prehensi e i p cts of se e e rise ith foc ses on de ogr phic spects inc ding the iss es of discrep ncy et een d pt tion po icy nd p ic percei ed interests t h s e p oyed i ed ethods ppro ch consists of sp ti nd n eric ode ing techniq es nd pro i ity st tistics to t e pro e s ising fro ti discip in y di ensions An on going co ponent site specific st dy in Port Ade ide consists of ris ssess ents of stor s rges to co st sett e ents pro iding det i ed se ine d t for f rther in depth in estig tion of the se e e rise i p cts on potenti y ffected st eho ders

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Title: ***co n c n c no o co n y n y o c n A***

ntern tion y co nity energy pro ects h e een i port t ech nis for f ci it ting tr sition to ore s st in e energy syste s in the ight of c i te ch nge his present tion i disc ss the recent or ndert en to cre te en ing too for co nity energy pro ects pecific y co nity energy pro ects e defined h ing three fe res.
se rene e energy or o c on techno ogies
Distri te oc ise s pp y d
De ocr tize go ern ce thro gh co nity o nership d or p rticip tion

A rier enefit ysis of co nity energy pro ects identified th e of technic no edge in co nities s ey constr nt o ddress this rier the Co nity Energy Decision Assist nce oo CEDA s de e oped sed on ser ysis d re ie s of e isting energy too s s st in i ity decision ing fr e or s d ppropri te techno ogies CEDA ses E ce p for to pro ide sers ith ti criteri decision ysis process for fi e energy techno ogies ind ini ind r Di o t h i h o p o

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d s in in nd A str i e ey f infr str ct re nd e essenti for the econo ic s r i of r r siness d ring s st ined dro ght o e er h sh id c i tic conditions res t in nn e por tion osses gre ter th n nn ter s ge he p rpose of this st dy is to in estig te the fe si i ity of rep ging s f d s ith gro nd ter d s constr cted y fi ing the f d s ith gr e or s nd ter is then stored in the soi pore sp ce here e por tion decre ses s f nction of ter depth e o the s rf ce of the soi nti depth of e por tion is neg igi e A tho gh stor ge o e is red ced this ethod y e n efficient tern ti e to the c rrent n oid e e por tion osses fro open s rf ce ters D y e por tion d nd stor ge efficiency of represent ti e f d s h s een co p ted to the co p ted e por tion nd stor ge efficiency fro eq i ent d s fi ed ith co se teri D h s een t en for n er of sites in estern Ne o th es fro to Res ts h e sho n th hen the ter e e is e o the s rf ce e por tion is signific nt y red ced nd ter s ed p tic y fro ger d s in id regions r ther th n se i id regions For the c se of the gest f d considered Mi d r the er ge nn o e of ter i e e in the f d o er the ye s of d is percent Res ts for the corresponding gro nd ter d gi e the er ge nn i e o e c c ted s percent of the tot d o e i e percent of the porosity he st dy conc des th the pp ic tion of gro nd ter d s o d e enefici in id e s of A str i for ger deeper stor ges ho e er not ch enefit is seen in their pp ic tion in se i id regions Gro nd ter d s red ce e por tion osses nd ppe to e n effecti e stor ge so tion t ore det ed si tions o er onger c i tic periods s e s fie d tri s sho d e ndert en efore they e i p e ented in A str i

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e er ining h s the potenti to pro ide c i te independent fit for p rpose ter so rce r nge of sc es tor ery ne to the de nd in A str i s r n e s he ority of A str i s ste ter tre ent p nts P e oc ted on the co st in c ose pro i ity to the pop tions they ser e ith the of the tre ted eff ent eing disposed of y oce n o tf n drying c i te this pr ctice c n e considered stef est neg igent orst And hi e the percent ge of eff ent eing recyc ed n tion y is gr d y incre sing the econo ic fe si i ity of this type of sche e ge sc e ind stri re se etc i contin e to di inish his is d e to the incre sing dist nce et een the so rce nd ne de nds Con ention co st sed ge sc e Ps tre ting of city s ste ter c n typic y on y pro ide tre ted eff ent in cost effecti e nner to de nds of s fficient sc e in c ose pro i ity to the P d e to the cost of pipes nd p ping

e er ining ho e er c n t p into the r n se er net or ner n se t p e thse s

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e h e ide s o t ho ch nge is de hether e tic te it or not his

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Title: *d c on n*

Month y r inf nd te per re ti e series ere n yzed sing d fro the e D st tion in the M rr y D ing Ri er B sin MDB e he c i tic indic tors P ific Dec d Osci tion PDO nd the o thern Osci tion nde O ere c c ted nd co p ted sing corre ogr nd cross corre ogr his pro ided e idence th O is seri y corre ted p to g onths here s the o er freq ency PDO is seri y corre ted p to e st g onths O r n ysis pro ide e idence th r inf is red ced d ring periods of neg ti e O nd the inter ction et een PDO nd O es this effect ore prono nced d ring periods of neg ti e PDO he tocorre tion of resid s nd the rst coefficients indic te ong ter dependencies For r inf rst coefficient s to regressi e process ith second order AR ith p eters esti ted y fitting to the resid series P D s not signific nt y gre ter th n es of For te per re D n AR process ith p eters esti ted y fitting to the resid series P s signific nt y gre ter th n es of sing spectr n ysis e e p ined the distri tions of i nce of r inf p ttern nd s ggested

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Title: ***X o o n n co c n co o n n y c on***

Recent y co p eted rese ch y the thor into the i p cts of c i e ch nge on r n ndsc pes ho e g rdens sho th t.

- P rticip nts h e c e preferences for getting ide s o t g rdening in ti es of c i e ch nge
- P rticip nts i oo to the se es friends oc n rseries nd print edi to g ther ide s
- tr tegies foc s strong y on changes in plant selection, placement nd pp ying criteri for drought hardy/ tolerant plants.

o e i ion A str i ns o n ho es ith g rdens nd spent i ion on the in
D ioto

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Research Area: r M ge ent r nsport nc sion

Title: ***Mo n d c on d ! on***

A str ct ords A ehic e s engine te per re h s signific nt effect on the t ipipe e issions of th ehic e EMEP CORENA R E issions n entory G ide oo p ished y E rope n En iron ent Agency st es th three y c ysis ehic e oper ted ith co d engine c n h e p to % incre se of C on Dio ide CO e issions ti es higher O ides of Nitrogen NO e issions nd ti es higher Meth ne C e issions hen co p red to e issions fro ehic e oper ted ith hot engine Dri ing ehic e ith co d engine is n e eryd y occ rrence for ority of A str i ns hort trips h e consider e sh re of tot trips herefore the sh re of ehic e tr e ed ith co d engine is signific nt his pre t E ho o i e o t i n e o t foi s D Dn h

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An efficient d effecti e e tion d p nning ti ities req ires re i e too th c n predict the i p cts of the ch nges to the syste s of interest either no or in the f t re hen cert in ch nges pp ied to it h too is c ed s ode his

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ncert inties ssoci ted ith c i te ch nge h e posed ne ch enges to nd se p nners hese ch enges c n e ddressed ore effecti e y y sing ne techniq es nd too s s ch M ti criteri Decision M ing MCMD his p per e p ores pp ic tion of MCMD to nd se p nning nder the i p ct of c i te ch nge n MCMD process the pro e c n e str cted s ho to deri e eights r n ing or i port nce for set of cti ities cording to their i p ct on the sit tion nd the o ecti e of decisions to e de B sed on the f ct th y sing MCMD e i e e to p t different i port nce eights on ri e criteri these techniq es c n e sed s strong too s to p t ore e ph sis on c i te ch nge e ents in f t re de e op ent p nning processes F rther ore MCMD techniq es h e the c p city for ringing ore e perts no edge together ith different ie s

On the other h nd nd se contro is e no n nd cost effecti e e n for red cing the d erse i p cts of c i te ch nge e ents on f t re de e op ents his st dy introd ces ne ppro ch to i pro e nd se contro n this ppro ch MCDM techniq e is sed to identify ess ner e e s for f t re sett e ent nd infr str ct re p ce ent n this ppro ch the i p ct of c i te ch nge on nd se p nning is t en into consider tion y de e oping ech nis th t o s oc tion of s it e eights to rio s spects of c i te ch nge th t co d h e i p ct on nd se

ey ords M ti Criteri Decision M ing c i te ch nge e ents nd se contro s Geogr phic nfor tion yste G

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Title: ***n c [illegible] nn n y [illegible] o [illegible] [illegible] [illegible] n [illegible] [illegible] n***

nfr str ct re p nning in A is sed on tr dition engineering concepts for energy ter se er nd ste n ge ent f ci ities A ne ode is proposed th i ssist sett e ents etter d pt to c i te ch nge nd si t neo s y pro ide n r n p nning fr e or for dec r onising the econo y For e p e the ter Corpor tion i poses ch rges for infr str ct re c ed t nd rd e d or s Contri tions for de e opers estern Po er rdortep oo e c o En Po P r D D d

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he ste dy incre se in r n pop tions nd the possi e onset of c i te ch nges th t y d erse y ffect the o nt of ter i e in c rrent ter s pp y syste s es the st dy of r in ter h esting nd recyc ing scen ios high priority t is s ggested th t ny syste of ter s pp y th t c n red ce the o nt of ter dr n fro in reser oirs h s to e of enefit to the ho e s pp y region especi y in ter s of dro ght nd ter s pp y sec rity

his present tion descri es ers ti e ode ing fr e or hich c n si te ide riety of co in tions of centr ised nd decentr ised ntegr ted r n ter M n ge ent sche es fro the ot ent to the est te or s s r sc e he fr e or co ines t o ode ing ppro ches he first c ed r nCyc e si tes ter s pp y stor ter nd ste ter sing ot ents s the sic i ding oc A tho gh r nCyc e c n si te processes in gre t det it ss es th t the net or for s directed cyc ic gr ph his si p ifies the connecti ity ogic t prec des in estig tion of syste s ith decentr ized stor ge feed c s nd tip e s pp y p ths o o erco e this second ode sed on net or ine progr ing is e edded in the r nCyc e fr e or to en e the ode ing of or recyc ing nd h esting scen ios s e s on the f y s pp y nd de nd decision ing sed on o ecti es r ther th n pre set oper ting r es

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Australian Climate Change Adaptation Research Networ k for Settlements and Infrastructure Early Career Researchers' Forum and Wor k shop
9, 10, 11 November @ UNSW

PROGRAM

D y   Mond y   Nove er

Venue: The Design Studio Room 501, Level 5, Civil Engineering Building (H20), UNSW

Time	Event	Name	Comment
8:30:00 AM	**Tea & Coffee on arrival**		
AM	elco e	Ron Co	
9:00:00 AM **9:30:00 AM**			
AM	***Climate Change & Education: A preliminary case study***	S lly irkp trick	Griffith U
4 AM	***Holding back the tide: what can past policies for coastal management tell us about the adaptive capacities of Australian local governments?***	Joh nn Mustelin	Griffith U
AM	***Estimating Storm-surge Risks to Coastal Settlements in Port Adelaide***	D ndong Zheng	Adel ide U
AM	***Climate Change and impacts on population mobility in Bangladesh: policy lessons for coastal settlements***	igy Sh r	Adel ide U
10:30:00 AM	**Brea k coffee/tea/discussion**		
AM	***Promoting Resilience to Climate Change and Disasters in Coastal Cities in Indonesia***	Riy nti Dj l nte	M cqu rie U
AM	***Climate adaptation for exposed jetties***	M tthew H rry	Griffith U
4 AM	***Pilot Study and Critique: Social Vulnerability and Community Adaptation - perceptions of, and willingness to adapt to, climate change***	Christopher Button	Adel ide U
12:00:00 PM	**DISCUSSION**	**Coastal Settlements**	**Chaired by Rodger Tomlinson**
12:30:00 PM	**LUNCH**		
1:30:00 PM **1:45:00 PM**			
4 PM	[illegible]		

Australian Climate Change Adaptation, Research Network for Settlements and Infrastructure Early Career Researchers' Forum and Workshop
9, 10, 11 November 2009 @ UNSW

PROGRAM
Day 2: Tuesday 10 November 2009

Australian Climate Change, Adaptation, Research Network for Settlements and Infrastructure Early Career Researchers Forum and Workshop
9, 10, 11 November 2009 @ UNSW

PROGRAM

Day 3: Wednesday 11 November 2009

Venue: **The Design Studio 501, Level 5, Civil Engineering Building (H20), UNSW**

Time	Event	Name	Comment
8:30:00 AM	**Tea & Coffee on arrival**		
9:00:00 AM **9:30:00 AM**			
AM	***Anaerobic digestion of putrescible solid waste as a response to climate change adaptation in waste management***	Xin Lou	Murdoch U
AM	***Transport network vulnerability approach for climate change adaptation***	Susil wati	U South Australi
AM	***Modeling Cold Start Effect on Vehicle Tailpipe Emissions***	Ivan Ilnkov	U South Australi
AM	***Introducing a simple and robust neural network technique for forecasting purposes***	Gusri Y Idi	U South Australi