How do you plan for a Chinese coastal city expected to expand sixty-fold, from 500,000 people to 30 million in 15 years? How do you accommodate its increasing population with rising sea levels?

And how would urban designers and architects envisage a regional Victorian city if it were to eventually double in size as its surrounding desert encroached?

Such issues of global warming and sustainability are explored in annual international architecture workshops hosted by universities in Australia, China, France, Japan, Spain and the United States.

“Bringing together different ways of teaching architecture from around the world helps create what could be called productive collisions of ideas,” explains Jan van Schaik, of RMIT’s School of Architecture and Design.

Now in their 10th year, the fortnight-long workshops draw together Masters architecture students and academics with local expertise among councils, developers and residents. Each workshop is documented in booklets and concludes with a public symposium and exhibition.

Topics have included ageing populations in Japan, dying cities in Detroit, post-oil cities in Spain and flooded cities in France.

RMIT hosted the 2004 workshop on the effects of retiring populations on Phillip Island and last year’s workshop in Mildura.

“The Mildura brief looked at the implications of its population expanding from 30,000 to 60,000,” says van Schaik. “Could the area, so long known for its irrigation of the Murray River, become known, for example, for ‘solar irrigation’? Could the urban area embrace the beautiful desert that surrounds it?”

Masters student and landscape architect Michaela Prescott was part of a workshop group which looked well into the future of Mildura, to 2100 and beyond. “We envisaged Mildura being overtaken by the desert, and worked on what that would mean for, say, power generation and the increase in salinity,” she says. “We imagined an ‘upper city’ providing shade for a ‘lower city’.”

Prescott relished the opportunity to work “in an unfamiliar place with unfamiliar people. Despite the language differences with overseas participants, we discovered the most fluent form of communication was through drawing and making, I really enjoyed stretching myself.”

Jan van Schaik says tangible outcomes of the workshops vary in degree. In the Chinese coastal city of Lianyungang, five hours north of Shanghai, several of the 2009 workshop’s academics were invited to an impromptu media conference with the mayor. “He was very interested in the workshop and exhibition and at the media conference asked us for critical comments about the city and its future.”

Masters graduate Chris Gilbert was part of a group at Lianyungang which proposed a “Future Past City”, in which the waterfront city would systemically retreat from the rising sea levels, creating a modern-day, ongoing Atlantis.

“A city is never complete,” says Gilbert, “so our proposal showed how a city can evolve even while facing decay.” Gilbert found the workshop “eye-opening and enriching” and returned to Lianyungang in 2010 for further research into his final Masters project.

The next workshop will be in November, on Reunion Island, off Madagascar. There are bound to be more productive collisions of ideas.