Welcome to this first issue of ‘ISLAND STUDIES – Indian Ocean/Océan Indien’, which happens also to be a special one, developed by the University of Seychelles and launched in the context of the 3rd International Conference on Small Island Developing States, in Samoa.

Two regular issues of the publication will be produced each year, with the possibility of special editions to be issued as the need arises and subject to the occurrence of events that warrant such initiatives. The publication is meant to be a forum that promotes the understanding of complex issues and vulnerabilities that hinder the development of islands of the Indian Ocean sub-region. It will contribute to advocate means to identify and address emerging island issues.

‘ISLAND STUDIES – Indian Ocean/Océan Indien’ aims at contributing to a knowledge-building and sharing process on development matters pertaining to islands of the Indian Ocean sub-region by establishing a platform for information exchange among relevant stakeholders and promoting awareness of the challenges and opportunities that are inherent to islands.

By seeking to explore the application of theoretical and empirical studies to island issues, ‘ISLAND STUDIES – Indian Ocean/Océan Indien’ will provide a forum where intellectual work of significance will be published. Hence, it will assist in bringing together intellectuals and professionals from the public and private sectors, NGOs, university faculty and researchers, as well as policy makers and resource persons from development agencies and international organisations to discuss and share ideas, facts, opinions and island-relevant analyses.

For this present issue, we are happy to present to our readers a selection of 15 articles from diverse disciplines. To kick-start the discussion, Hardy and Simeon take us into the realm of the academia, by looking at the challenges ahead for institutions of higher learning in SIDS. Ratsimanetrimanana then initiates a discussion of the implications of a harmonious and sustainable development for Madagascar, while Muller et al. propose insights into the phenomenon of multidimensional poverty in Seychelles. This article in its full version may be consulted on the UNDP website. Proceeding from these discussions of issues that are central to national development, we will look at one crucial economic sector for islands of the Indian Ocean region, namely tourism, via reflections by Serviable & Serviable, and by Burridge. Thereafter, we will make an incursion into the cultural domain, via an exploration of the concept of créolité, by Persaud, followed by a literary interlude by Froissart and his reflection on Mascarene poetry. Nadal & Ancoura will then undertake a comparative analysis of the status of Seychellois and Mauritian Kreol. The next strand will be the environmental one, with contributions by Cooke, Shah & Henri, Rocamora and Dogley about various ecological matters touching the Seychelles and other small island developing states. We will conclude with two papers by Valentin and Deutschmann & Zelkine about ‘didactics’ and educational policy issues in the fields of mathematics and languages respectively.

I wish you a pleasant reading. Please visit our website and give us your feedback.

Dr Kris M. Valaydon
I am delighted to support this initiative of the University of Seychelles. Recognising the importance of knowledge development in the Indian Ocean, Dr Kris Valaydon and colleagues have produced the first issue of a new publication, ‘ISLAND STUDIES – Indian Ocean/Océan Indien’. It is intended to disseminate research findings and to encourage reflection, debate and discussion around key topics affecting the region.

The production of this issue is timely, as it will be available to delegates attending the Third International Conference on Small Island Developing States in September 2014, in Samoa. I am sure that it will help to point to how much these nations, not only in the Indian Ocean but in the various seas across the world, have in common.

As small island developing states, we currently face great challenges. Not only could we find ourselves again in the path of economic storms that are not of our making, but we are equally vulnerable to the impact of climate change in all its manifestations. Our relative isolation also makes us vulnerable to the actions of pirates who threaten our marine security, a condition upon which we cannot compromise in the interest of our trade and fisheries.

Yet, let us not forget that being a small island developing state also entails opportunities. I have personally championed the idea of the Blue Economy, pointing to the vast riches that lie beneath the sea. Because we are all, by definition, surrounded by oceans, we are in a prime position to take the lead in exploring their huge potential. Our ability to do so will be strengthened by the development of our own human capacity and the transformation of our islands into knowledge economies.

For all these reasons, ‘ISLAND STUDIES – Indian Ocean/Océan Indien’ is published at the right time – to expound on what is happening as well as to look ahead; to inform as well as inspire. It will appeal not only to readers in small island developing states, but also to those in countries elsewhere, with which ever closer links are being established.

Before ending, I would like to seize this opportunity to thank all individuals and institutions, in both the public and private sectors as well as the UN Resident Coordinator for Seychelles, for their invaluable support to this present enterprise.

James Alix Michel
President of the Republic of Seychelles,
Chancellor of the University of Seychelles
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Small island developing states are in the limelight. Or at least they are in 2014, designated by the United Nations as the International Year for Small Island Developing States.

In the great expanses of the Pacific, Atlantic and Indian Oceans, and in the more confined seas of the Caribbean and Mediterranean, a remarkable variety of geopolitical minnows struggle for economic, political and even physical survival. For a brief period, in September of this year, the eyes of the world will be on these small but significant nations. Against the backdrop of the UN global designation, it is in that month that their leaders and various campaigners will gather in Samoa for the Third International Conference on this theme. The event will provide a unique opportunity to explain to the rest of the world the formidable challenges faced by these nations and, also, the different steps that are being taken to achieve their own salvation and future progress.

It is in this global context that this paper will focus on just one small island developing state, Seychelles, and within this on just one aspect of development, namely, the place of higher education. Through a detailed look at a unique case study, it is hoped that lessons can be taken that might well be of interest to other such nations too.

Exemplifying a genre

The Republic of Seychelles is surely an exemplar of a small island developing state. Comprising 115 islands, the archipelago lies far out in the Indian Ocean, with its capital located some 1500 kilometres from the nearest continental land mass. In spite of the number of islands, only a few are habitable and the total population of them all is only 90,000, with most people living on the main island of Mahé.

Compared with most parts of the world, human settlement came late to these scattered islands and it remained uninhabited until 1770. For the first two centuries of permanent settlement, it was ruled as a colony, first by the French and then (for most of the period) by the British. Plantations were laid out and forced labour was introduced from neighbouring African countries; a tragic history but one that has, in turn, given rise to a vibrant Creole language and culture that is being belatedly recognized for its true worth. Political independence was granted in 1976, but after just one year, a coup led to a socialist-oriented, one-party system of government. At the height of the Cold War, the country found itself wooed by factions from both camps, and this was generally to its advantage. While its ideological leanings were towards the Soviet Union and its allies, a pragmatic decision was taken to allow the United States access for intelligence-gathering from mountain listening posts.

Democracy was restored in 1993, heralding the start of the Third Republic. President France Albert René (who had led the original coup and for the next sixteen years ruled the country) became the first elected leader, until he chose to stand down in 2004. Following the René era, the presidential office was occupied by James Alix Michel, a fellow revolutionary of the 1977 coup and afterwards a loyal government minister. General elections in 2006 and 2011 confirmed his position as leader of the majority party and, therefore, the country’s President. The nation recently celebrated his tenth anniversary in this position.

In fact, the past decade, far from being a continuation of the policies of the previous regime, has marked a striking change in national goals. While maintaining and even extending the undoubted social gains made since the coup – amongst which systems of free education and healthcare are the flagships – unadulterated socialism is no longer seen as the way forward. The hitherto dominant public services are encouraged to adopt many of the practices of the private sector, while measures have been taken to support the spread of an entrepreneurial spirit and the formation of new businesses. In place of a controlled currency, the Seychelles rupee has, since 2008, been floated on the open market, allowing a greater flow of international transactions. This has been accompanied by far-reaching reforms to enable the free flow of capital throughout the economy and to attract more foreign investment.

A second change is to look beyond the staple industries of the islands towards a more diversified economy. The rich fisheries of the Indian Ocean are, and will remain, a key source of income, and the challenge is to balance the world’s growing demands with the realities of a
finite supply of fish in the oceans; hence the concept of sustainable fisheries management. Likewise, tourism continues to grow and this has created a wide range of new service jobs, contributing in no small measure to a situation of full employment across the nation. There is also the prospect of an important new source of income if the known reserves of oil and natural gas below the sea are, in due course, exploited.

In spite of all these positive trends, the President has repeatedly indicated that the future success of all nations lies in their ability to grow and use more effectively their human capital. Thus, successful though it is now, Seychelles must achieve the transition to a knowledge-based economy. This will require a well-educated and skilled labour force, with opportunities for lifelong learning and training.

As well as these internal changes, a third factor has a more geopolitical dimension, matching the onset of globalization with a bigger role for Seychelles on the world stage. In part, this has been a case of force majeure, brought about by the incidence of piracy in the immediate region. Seychelles had to press its claims for support from the international community, something it has done with a remarkable degree of success. But it has also gone well beyond that, arguing the case for measures to adapt to climate change, to find ways to achieve sustainable development, and to promote the importance of the oceans and the idea of the Blue Economy. Moreover, as a small island developing state itself, Seychelles has made a name for itself on the world stage and is playing a significant role in preparing for the Samoa conference in September. Beyond that, it has its sights on a non-permanent seat in the United Nations Security Council.

It is against this background of far-reaching change that one can look more closely at the decision to establish a national university in Seychelles. Why was this done and what are the special challenges of doing so in a small island developing state? Given the relatively small numbers involved, does it, in fact, make sense for an island nation to establish its own university in the first place?

The University of Seychelles

The formation of a university in Seychelles exemplifies the kind of challenge faced by such nations. With a small total population, the decision could never be about mere numbers. In fact, there are three reasons which led the Government to go ahead with the project.

One reason is that, following independence and the creation of the Second Republic in 1977, education has always been at the top of the political agenda. The older amongst the leaders of the present Government can recall direct experience of a former system where only the rich could advance beyond elementary
UniSey already has a policy of encouraging its own graduates to take a junior lecturing position and to train in both teaching skills and higher-level studies while working.
be more economically viable in the event of a higher level of fee income. While the Seychelles Government is presently generous in its funding, it would be prudent to set the university on a more independent and stable financial platform. The trend across the world is undoubtedly towards a lessening proportion of financial support for the public sector, and a start should be made now to prepare for this. Attracting more students is the most obvious way to do so.

How, then, can one make small universities bigger, a challenge that must surely beset other island nations in similar circumstances? At UniSey, three strategies are currently being pursued in parallel: maximizing the number of local students, attracting students from overseas, and exploring the potential of regional networks.

Maximizing the number of local students

It would be all too easy to explain small student numbers in terms of the truism that there is a small overall population. UniSey set out in its first years on the traditional path of attracting full-time students – a mix of school leavers and professional secondments. Even for this mode, however, there will always be opportunities to recruit more.

Some potential students will be undecided about their ability to manage a degree course and will need careful counselling. Others may simply have missed the information about a course that might interest them in the first place. It is not enough to rely solely on newspaper advertisements and school advisors; young people have their own communication networks and will, ideally, be contacted through those. Similarly, secondments from government departments and (less commonly) industry, can be further explored. Are there potential links that were missed first-time round? Or is there a compelling case that may need to be reiterated?

A determined recruitment exercise can surely yield an additional five or ten percent of students wishing to enter a full-time course. In contrast, the scope to attract students who would prefer a part-time study mode is far greater. The potential catchment will include employees who are working full-time and missed the opportunity for university study when they left school; women, especially, who were fully committed in bringing up a family but who now have more time to undertake a university course; and, increasingly, older members of society who want to study primarily for enjoyment as opposed to career improvement. It is possible to meet the aspirations of all of these groups, through online delivery and/or blended learning (combining online with periodic day or evening classes). Many will also find it less daunting if a degree programme is offered in ‘bite-sized chunks’, with credits offered for individual modules. There could well be as many students who wish to study part-time as full-time, thus enabling numbers to be doubled.

Attracting students from overseas

During the first five years of its operation, UniSey has restricted entry to local students. This was a deliberate strategy, designed to prioritise opportunities for Seychellois to upgrade their skills and readiness to enter an increasingly sophisticated job market. From the start of the sixth year, it is intended, too, to attract students from overseas. This will have a dual advantage, not only in making class sizes more viable, but also in bringing different perspectives to the experience of all students.

But a question facing any small island university must be to ask why students should be attracted to such a location for their higher education. In fact, there may be a number of reasons for this, and in the case of UniSey, we make the following points. For a start, students can choose from a fair range of courses, many of them awarded directly by the University of London and other established universities. Moreover, our fees are lower than they would be in, say, London, so that it’s a cheaper option for students than studying the same courses in Europe. Because this is a new university, numbers are still small and there’s no fear of being lost in the crowd, as is the case in many modern universities; with small class sizes, everyone gets plenty of attention. Our academics are all well qualified and active in research as well as teaching, and our support staff are friendly and helpful. In this kind of setting, international students will soon find their way around. The main campus environment at Anse Royale (where international students will be located) is in a coastal village in a beautiful part of Mahé, but also on a bus route to the capital, Victoria. With a tropical climate and protected environment, Seychelles is one of the world’s most attractive locations to live and study. Finally, Seychelles is a stable nation, and its people are used to welcoming visitors.

In short, small island developing states can present themselves as very attractive locations for university studies. Why pay more to go to a cold climate, when you can save money and spend three years in a tropical environment?

Exploring the potential of regional networks

A third strategy to make small universities bigger is one that has not yet been fully explored. In the Indian Ocean region there are two pan-national bodies, the Indian Ocean Commission and the Indian Ocean Rim Association, and both encourage cooperation between their member states. But let us think carefully why universities within the region might wish to cooperate, as opposed simply to compete with each other, and how the region as a whole could benefit if they chose to do so.

In certain respects, it is not in the interests of universities to cooperate. They are each constituted to meet their own
goals, which will usually match those of the nation as a whole. Thus, the University of Seychelles is charged to provide opportunities for Seychellois to attain higher levels of knowledge and enhance their capacity to contribute to the future of the nation. It will assist in the transition of Seychelles, away from dependence on primary activities and tourism and towards a more balanced knowledge-based economy. Other island states have embarked on a similar journey. Because of the way that universities are financed, they generally need to recruit as many students as possible to ensure financial viability. So, in most cases, it would not be in the interest of any one university to allocate a limited number of students to another. In three respects, however, this need not be the case.

One scenario is where universities might offer different specialisms in cognate subjects, so that students can enjoy a wider choice than from any one university. With the help of online access, a student in, say, Seychelles, could select a course unit offered in La Réunion, without actually having to travel there. This kind of situation would be especially advantageous, given that universities in the region are generally of a modest size. It would enable the kind of subject choice that is normally only possible in a university with a large student population.

A second scenario is that the Indian Ocean can be marketed as a remarkably attractive location for international students. It offers an exceptional natural environment, it is a healthy area in which to live and politically stable, it is generally more cost-effective as a place to study than many other parts of the world, and there is already a network of good universities. There is an enormous potential demand from students across the world – from China, India, Africa and Europe – and even a very small proportion of this potential could change the fortunes and cultural vitality of local universities. But the costs for any one university to market this on its own would be high, sometimes prohibitively so. Would there not be advantage, instead, in subscribing to a joint marketing venture to tell the world about the benefits of studying in this region? Costs would be shared and there is every chance that these would easily be covered by a successful recruitment campaign.

A third opportunity for cooperation is in the field of research, offering a means of achieving centres of excellence in each of the member universities. Currently, even the largest universities in the region are small by international standards. Can any one of these on its own establish, say, an international centre of excellence for medicine? Or high-level environmental research, matched to the exploration of the concept of the Blue Economy? Other centres might be for a Silicon Valley equivalent; or for sustainable agriculture and food production to meet anticipated shortages from conventional sources? The point of each of these is that the cost of establishing and maintaining a centre of this magnitude would probably be beyond the means of any one university, but it could be entirely achievable for a consortium. As all of the universities would contribute to the foundation of such centres, all would duly participate and share in the benefits. Moreover, each university would have the advantage of accommodating one such international centre of excellence.

Not-so-small island developing states

There are advantages in being a small nation, not least of all, because it is likely to be more manageable and with a stronger sense of identity than larger ones. But there is also the disadvantage that per capita development and governance costs are disproportionately high. Moreover, in the case of small island developing states, there is a vulnerability factor – they can easily be blown off-course by global economic storms, as well as being susceptible to environmental hazards (not least of all the threat of rising sea levels). For all of these reasons (positive as well as negative) support for island universities is an important strategy, not simply for survival but also for economic and social success. Knowledge is surely the key to a sustainable future, and universities are the best means to enable this.

With modern forms of transportation and electronic communication, most small island states are no longer remote, in the way that for most of their history they have been. It is for this reason that the prospect of forming a national university is a viable option. Materials can be shared across the oceans, there is no need to fill a library with expensive printed materials, and student numbers can be boosted by recruitment from other countries where demand for a university place is high. In fact, higher education is a boom industry, with global demand far exceeding supply. Especially by working together, small countries in distant locations can share in the benefits that their own university can bring. Not only are they business in their own right, providing jobs and boosting local trade through their own activities, but they encourage links with other countries that might well lead to further benefits for the economy.

The University of Seychelles offers a working model of how it is possible to establish a university with a small catchment population. These are still early days but already the signs are promising that it will make a valuable contribution to the nation while, at the same time, strengthening regional networks. Other small island states – not simply those in the Indian Ocean, but also in the Pacific and elsewhere – might wish to follow a comparable path. Instead of doing so entirely on their own, they may choose to work in partnership with others, creating new networks of knowledge. At the very least, when the eyes of the world are on the various futures of small island developing states, this is an approach that is surely worth exploring.
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In the preface of his article entitled 'A review of Business – University Collaboration', Wilson (2012) quotes Dearing: "As castles provided the source of strength for medieval towns, and factories provided prosperity in the industrial age, universities are the source of strength in the knowledge-based economy of the 21st century."

Universities fulfill Dearing’s vision through two main ways, namely, producing graduates for the job market and conducting research and providing scientific and technological innovations that promote real and sustained economic growth and social development. This scenario holds true for most developed countries where the number and range of universities caters not only for local, but also international needs. For small island developing states (SIDS) such as Seychelles, this expectation must necessarily be viewed against the backdrop of a significant absence of universities. Presently Seychelles has only one university, known as University of Seychelles (UniSey) recently established in 2009. Notwithstanding, UniSey has a vital role to play in terms of how it transforms its society into a knowledge-based society by elaborating on the traditional mission of teaching and research to include a “third mission” of addressing the needs of industry and thereby contributing to economic growth and development” (Guimon, 2003:1). This “third mission” inevitably involves developing a collaborative strategy between the university and industries. While this university-industry collaboration, being a relatively new phenomenon in Seychelles, can benefit from drawing on the experiences and knowledge of countries that have successful track records, there is a need to look at the unique context that UniSey finds itself in.

There has been a proliferation of literature about the experiences of developed countries to better understand the processes entailed in the development of university-industry collaboration. However, little has been written about the experiences of such collaboration in SIDS. This paper will focus on university-industry collaboration especially in SIDS. It has grown throughout the 20th century origins back approximately 125 years and in Research & Development traces its roots back approximately 125 years and has grown throughout the 20th century (National Research Council, US, 1991). The term ‘university-industry’ is used to encompass a collaborative arrangement between a university and industry. ‘Industry’ in this sense includes government organizations, community organizations, business organizations and external research organizations. The organizations can range from small community-based organizations to large multinational corporations. Some of the more common types of university-industry collaborations are manifested in activities such as publications, workshops, conferences, guest lectureships, work-based opportunities for graduates, etc. Each of these endeavors represents a different type of university-industry collaboration that determines the nature of relationship, type of activity, outcomes

Understanding university-industry collaboration

Collaboration as “a mutually beneficial and well-defined relationship entered into by two or more entities to achieve results they are more likely to achieve together” lays the foundation for a reciprocal arrangement between the parties concerned (Winer et al. in Slusarek, Sobota & Mendec, 2010, p.1). Such collaborative endeavours are almost always guided by certain basic elements which facilitate the coming together of individuals, organizations and groups, although each may have diverse interests, to work toward a common goal. Additionally, certain criteria are also necessary for successful collaborations, according to Slusarek, Sobota and Mendec (2010, p.1). These include: a) a win-win situation; b) well-defined relationships, c) allowing for different perspective on issues and d) more efficient cost-benefit. There have always been links between university and industry. For example, in the U.S., university-industry collaboration in Research & Development traces its origins back approximately 125 years and has grown throughout the 20th century (National Research Council, US, 1991).
University-industry collaborations in these contexts are critical in realizing the goals of responding to the needs of industry and thereby contributing to the economic growth and development of the nation.

Table 1: A typology of university-industry links, from higher to lower intensity.

<table>
<thead>
<tr>
<th>High (Relationships)</th>
<th>Research partnerships</th>
<th>Inter-organization arrangements for pursuing collaborative R&amp;D, including research consortia and joint projects.</th>
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<tr>
<td></td>
<td>Research services</td>
<td>Research-related activities commissioned to universities by industrial clients, including contract research, consulting quality control, testing, certification, and prototype development.</td>
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<tr>
<td></td>
<td>Shared Infrastructure</td>
<td>Use of university labs and equipment by firms, business incubators, and technology parks located within universities.</td>
</tr>
<tr>
<td>Medium (Mobility)</td>
<td>Academic entrepreneurship</td>
<td>Development and commercial exploitation of technologies pursued by academic inventors through a company they (partly) own (spin-off companies).</td>
</tr>
<tr>
<td></td>
<td>Human resource training and transfer</td>
<td>Training of industry employees, internship programs, postgraduate training in industry, secondments to industry of university faculty and research staff, adjunct faculty of industry participants.</td>
</tr>
<tr>
<td>Low (Transfer)</td>
<td>Commercialization of intellectual property</td>
<td>Transfer of university-generated IP (such as patents) to firms (e.g., via licensing).</td>
</tr>
<tr>
<td></td>
<td>Scientific publications</td>
<td>Use of codified scientific knowledge within industry.</td>
</tr>
<tr>
<td></td>
<td>Informal interaction</td>
<td>Formation of social relationships (e.g., conferences, meetings, social networks).</td>
</tr>
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and time-frame needed to fulfill their goals. Guimon’s (2013) article “promoting university-industry collaboration in developing country” draws on Perkmann and Walsh’s (2007) work and presents the following typology of university-industry links, to demonstrate relationships ranging from higher to lower intensity that generally tend to feature in such initiatives.

It is apparent from Table 1 that the different types of collaboration between universities and industries are manifested through different objectives, scopes and institutional arrangements. Not only are these collaborations manifested from more to less intense, they also tend to include degrees of formal or informal relationships from formal equity partnerships, contracts, research projects, patent licensing, and so on, to human capital mobility, publications, and interactions in conferences and expert groups, among others (Hagedoorn, Link, & Vonortas 2000). Long-term collaboration consists of universities and industries engaging in joint projects and public-private partnerships (e.g., university-industry research centres and research consortia). Such collaborations may take place over different time periods with options of long-term and short-term collaboration. For a number of SIDS and more especially for Seychelles, the higher-order collaborations may be delayed as these require a higher degree of sophistication in terms of structure, equipment and resources. Nonetheless, university-industry collaborations in these contexts are critical in realizing the long term goals of responding to the needs of industry and thereby contributing to the economic growth and development of the nation. For this purpose a distinction between collaborations may be helpful in facilitating the development of mutually beneficial relationships in these contexts to meet the more immediate needs while developing strategies for the former. For example, university and industry can develop long-term projects such as creating research centers or research consortia. In this way, industry can turn to research centres to influence ever scarcer research funds and to support their internal research and development efforts to improve their learning processes in critical research fields.

From Koschatzky & Stahlecker’s (2010) distinction between collaborations, the more immediate short-term collaboration consisting of on-demand problem-solving with pre-defined results articulated through contract research, consulting, and licensing would be an appropriate strategy for SIDS given the shortage of resources and expertise. By contrast, long-term collaborations encompass joint projects and partnerships (e.g., joint university-industry research centers and research consortia). This is not to say that long-term collaborations should not be pursued but rather that they should be flexible and allow industries to contract for a core set of services and to periodically
re-contract for specific deliverables. Its strategic and open-ended nature provides a multifaceted platform where industries can develop stronger innovative capacity in the long run, building upon capabilities, methods, and tools which can benefit both universities and industry.

Guimóns (2013) states that the priorities and scope of university-industry collaboration in developing countries, which are also applicable to SIDS, are affected by a number of factors. Firstly, their ‘small’ size is especially relevant as it refers not only to the country’s population but also to the economically “low inter-industry linkages” (Briguglio, 1995, p.1616). These small states have limited financial, natural and human resources and are generally dependent on the international community, for example, the importation of human resources in the form of skilled labour and expertise, and for goods and economic support. This smallness can be capitalized by the capacity of SIDS to utilize physical and relational proximity for the benefit of developing long-term mutually beneficial relationships which are in contrast more complex in large industrialized societies. For example, personnel exchange is an important component of technology transfer in SIDS. It brings expertise from university to industry and transfers practical knowledge from industry back into academia, where it is refined and further integrated in relevant programme areas.

Benefits and challenges of university-industry partnerships

The rise of a global knowledge-based economy has intensified the need for strategic collaboration between university and industry. A number of mutual benefits of university-industry collaboration flow from the types of partnership arrangements. These include but are not limited to funding for research and innovation, exchange of intellectual assets, sharing of resources and technical support. Given their limited resources, university and industry collaboration where possible in SIDS would help both parties to achieve common goals such as: a) looking for solutions to complex problems which are beyond the scope of one party; b) bringing together greater knowledge, ideas, skills, and resources, allowing more to be accomplished by maximizing talent and assets; c) minimizing duplication and maximizing resource utilization for greater successes.

Levy and Wolff’s (2009) study of collaborations of more than 1,000 firms in one European university revealed that within these partnerships the potential for a richer resource environment existed. Similarly, Harman (2004) compared a doctoral programme in Australia that offered an integrated industry-based work study and found that students enjoyed better access to resources, such as equipment and supervision. Drawing on these examples, SIDS can benefit from the experiences of established university-industry collaborations in terms of what worked for them, why and how such endeavours can be successful. One particular example worth mentioning here draws on the work on the Board of Trade of Metropolitan Montreal in partnership with Leger Marketing. They found that a key issue related to the differences in organizational culture. Where a fundamental difference exists in cultural values and practices, it is likely to affect the very essence of the partnerships and hence be experienced as a contested component of the partnership.

The issue of the private/public domain of information representing the open nature of academic science is another challenge industry has to address due to the conflict with companies’ need to protect technologies they use. The clash between university and industry ethical systems are prone to create tensions within partnerships, e.g. the concern of industry is to make profit (their ethical values are secrecy, privatization and hierarchy) while university researchers are concerned with seeking and teaching the truth. Therefore the university “cannot accept secrecy or withholding of data without eroding an important justification for its existence” (Keney, 1987, p. 129). (Valigra, Hudson, Belfied, & Koekoek, 2012; Keney, 1987 Perkm & Salter, 2012). The time factor poses another challenge for University-Industry collaboration where academic research is seen as long-term slow development and in sharp contrast to industries’ more time sensitive goal of product development to solve day-to-day problems.

SIDS must be wary of the social changes and challenges that economic development through collaboration brings which challenge their traditional culture. Guimons (2013) proposes policy options that may promote successful
collaborations between university and industry in developing countries. These are also useful for SIDS. It may help address the challenges of being “small”.

University-industry collaboration in SIDS

University research is very expensive due to costly laboratories and equipment and raising funds to support research in the sciences becomes more difficult. Even universities in developed countries face the challenge of supporting cutting-edge research and are even more so for SIDS. Universities in SIDS will need to select fields of research or study that are affordable and linked to national needs and priorities. For example, environment, education, agriculture, etc which are considered as priority areas for SIDS. With reference to the tertiary institutions (including universities) in the Commonwealth Caribbean countries, we can refer to (2001, p. 52) suggestion that tertiary institutions need to look to prior successful collaborations and draw on the organizing framework as a basis for further collaborative endeavours.

Consistent with Peters’ (2001) suggestion, on 14 January 2005, an MOU was signed by representatives of five founding member institutions: University of Malta, University of Mauritius, University of the South Pacific, University of the Virgin Islands, University of the West Indies on the setting up of the University Consortium of Small Island States (UCSIS). The University of Las Palmas de Gran Canaria and the University of Seychelles are now members of the UCSIS also. The mission of UCSIS is “to enhance the capacity of graduate education institutions in SIDS by facilitating the development of the institutional and systemic capacity needed to implement the Barbados Programme of Action” (http://www.sidsnet.org). The main aim of the consortium is to strengthen the national capacity of SIDS to implement the Barbados Programme of Action (BPoA). The BPoA for the sustainable development of SIDS was established to identify priority areas and specific actions necessary for addressing the special challenges faced by SIDS which are too difficult for one country, organization or sector to address alone. These are economic, environmental, and social developmental vulnerabilities facing islands (www.unesco.org).

Since 2009, the United Nations Department of Economic and Social Affairs (UNDESA—SIDS) unit and UCSIS in partnership with the University of Las Palmas de Gran Canaria and the University of Seychelles have been involved in the implementation of a project to establish a common Information and Communication Technology platform. This is a follow-up project of the 2005 Mauritius International Meeting on further implementation of the Barbados Programme of Action for Sustainable Development of SIDS and one of the UNDESA projects aimed at addressing “Capacity development through education for sustainable development and knowledge management for SIDS.” The project is a platform enabling UCSIS to deliver a masters degree programme in small islands sustainable development. “The project aims to establish solid foundations for capacity development for the sustainable development of SIDS through enhanced institutional, human resource, and technological capacities in the areas of knowledge management and education for sustainable development” (www.unesco.org). The project receives technical advice and support from UNESCO through status as UNITWIN network with Funds in Trust from the Government of the Kingdom of Spain, according to http://www.sidsnet.org.

“The UCSIS has registered on the Partnership Platform for 2014 Third International SIDS Conference on SIDSs. The UCSIS, with the support of UNDESA and the Government of Spain, has developed a joint Master of Science programme on sustainable development which will be launched in 2014. This programme is targeted to students from its seven* member universities who will take a combination of in-class from their home universities while being able to access courses offered from other member universities on-line. Building on this successful partnership, the UCSIS will design a joint research programme to develop solutions to key development issues affecting small island states. The programme will involve UCSIS member universities and the Caribbean Sustainable Development Solutions Network. UCSIS will also be developing an inter-university research programme focusing on key development problems facing SIDS. UCSIS plans to highlight such ongoing and prospective initiatives at the Samoa Conference.”

As can be seen above, the UCSIS makes it possible for universities in the SIDS to collaborate with major international and regional organizations as well as with universities and research institutions to promote the interests of SIDS. Partnerships among universities, local or international research institutions, serve to complement and/or expand existing research strengths. For example, the Islands & Small States Institute in the University of Malta collaborated with the Commonwealth Secretariat,
the University of the West Indies and the University of the South Pacific in the publication of a book on “Growth with Resilience” which is one of the nine key pillars of the G-20. The book focuses on matters relating to islands and small states. The institute is also involved in a number of research initiatives on climate change which provides a means to engage internationally and influence world opinion on issues pertaining to SIDS. It publishes a series of publications entitled “Occasional papers on islands and small states”; and promotes research and training on economic, social, cultural, ecological and geographical aspects of islands and small states. Although, it should be noted that any development-funded institution is also influenced by, and to some extent dependent on, its partner or support agencies and their expectations, the Islands & Small States Institute in the University of Malta could point towards some characteristics that other universities in SIDS might adopt in the future: collaborative, international, working with neighbouring states; issues and funders of both developing and developed regions.

Making university-industry collaborations work in SIDS

As pointed out earlier, some SIDS have limited potential for achieving economies of scale, therefore manufacturing industries may be almost non-existent. Industry is also the product of the wider systems found in SIDS and may suffer from financial crisis. As a result of this financial crisis, developing industry linkages and engagement in university-industry collaboration may not always bring the desired result for staff promotion in universities in SIDS. Universities in SIDS rely largely on government university budgets for funding, hence making it difficult for collaboration with industry as a criteria for promotion. It is widely accepted that people are the most important form of knowledge transfer. Successful universities worldwide have multiple methods to link their students to work experience and job opportunities in the private sector. These include mentorship programmes, internships, co-ops, business plan competitions, and traditional career service. The University of Seychelles has one such programme-internship that seeks to foster student entrepreneurship. It is a good example of student engagement with industries. Students have opportunities to work in areas relevant to their programme of study and important to the industries they assist.

The University of Seychelles is currently in the process of establishing a research center with the intention of industry partnerships. The primary aim is to engage in academic collaborative research with industry. In this connection, close cooperation has been established with UMEA University, in Sweden, mainly for staff and student exchange, curriculum development and research collaboration. This partnership will help to strengthen the local research expertise, skills and knowledge, by identifying potential areas of research interest that could generate co-publications in priority fields and the obtainment of funding for the respective universities. The spin-off would be for the transfer of knowledge to the local context and, in turn, a mutually beneficial relationship between university and industry.

For example, a regional conference has been proposed on Creole language and culture to be jointly organized by the two universities; provisions for staff ‘secondment’ or exchange in areas where courses are jointly offered; opportunities for student exchange between the two universities; designing of joint undergraduate and/or postgraduate programmes (which could involve other universities in the Indian Ocean region) in languages (English, French and kreol) and to be delivered either in face-to-face model or online. Establishing university research centres requires the physical infrastructure to support a growing knowledge-based economy. In developed countries, this has been realized through the support of developers building offices and laboratory space. By so doing, they share the risk that these centres are going to become successful in the future. The University of Seychelles is still in its formative stage; therefore it is dependent on investors during its early growth and similarly for such infra-structure development. Education and training remains a key role of universities especially in developing lower-income countries where there’s a lack of skilled workers which hinders competitiveness and innovative capacity of industries. Industries’ strongest link with universities is through recruitment of skilled graduates. Establishing a consultative process in which the voices of business managers are considered in curriculum development may help universities to better respond to the industry needs.

Establishing and supporting student internship programmes and joint supervision of graduate students who may undertake their research within industry is another way of enhancing knowledge diffusion from universities to the private sector. For example, the University of Seychelles, has signed a MOU with the Seychelles Investment Board. Through this partnership, students will have access to the Investment Board and benefit from its internship programme as well as links with the business community (www.unisey.ac.sc). The partnership will help improve employment possibilities and broaden the career paths of university graduates.

Conclusion

There seems to be general agreement amongst authors that university-industry collaboration is a good thing; yet it is also seen as a challenging process which varies from university-industry type of relationships. Overall, the University of Seychelles has attempted to make some strides in developing a diverse range of partnerships with industries locally, regionally and internationally. In the Seychelles, many successful businesses may have little to no direct connection with the University of Seychelles as they grow their businesses. However, they may find value being in the environment that it creates. For example, it is useful to them because it tends to produce qualified individuals that can be hired. The presence of the university is important for workforce development. It provides life-long learning opportunities which are valuable to industry as they continue to upgrade and utilize new knowledge and technology for the benefit of Seychelles society.
Work-based experience not only provides opportunities for students to improve their learning experiences and develop adequate skills for future employment. Industries in fact can benefit from the new knowledge and technology that universities teach their students which in turn, can help improve their business performance and the community as a whole. Universities on their side achieve better performance and the community as a whole. However, certain barriers such as funding, different time frames in getting a product on market, difficulty in maintaining good relationships because of cultural issues and difference in missions and visions restrict university-industry collaboration.

There has been no research to investigate university-industry in SIDS. However, the literature reviewed suggests that there is a growing strength to motivate universities and industries in SIDS to form alliances. This is because it is widely recognized that the challenges facing SIDS are interlinked and cannot be tackled by one country alone (http://www.scdiev.net/global/vulnerability/news/small-island-developing-state-alliances.html). University Consortium (UCSIS), a collaborative project, which, with the Spanish government and UN Department of Economic and Social Affairs, has been formed for the purpose of addressing critical areas where global partnerships are needed such as climate change, oceans, waste, sustainable tourism and disaster risk reduction.

**Résumé**

En préface à l’article “A review of Business – University Collaboration” [Une reconsideration de la collaboration entre le monde du travail et l’université], Wilson (2012) cite les propos de Dearing, à l’effet que :

“…toute comme les châteaux ont été à la base du règne des villes médiévales et que les usines ont conduit à la prospérité pendant la révolution industrielle, les universités ont été la source d’énergie de l’économie du savoir au 21ème siècle…”


**References**

1. Introduction

Localisée au sud de l’équateur, dans l’océan Indien, Madagascar est la cinquième plus grande île du monde (592 040 km²) après l’Australie, le Groenland, la Nouvelle Guinée et Bornéo. Elle est séparée du continent africain par le canal de Mozambique. La distance entre la côte ouest de Madagascar et la côte du Mozambique est environ 400 km. Les îles voisines de Madagascar sont: l’archipel des Comores (300 km au nord-ouest); l’île de La Réunion (600 km à l’est), Maurice (800 km à l’est) et les Seychelles (850 km au nord).

La population de Madagascar a été estimée à 20,8 millions en 2010 dont 20,3% vivent en milieu urbain contre 79,3% en milieu rural. Cette population se présente comme un mélange de Malayo-indonésien, d’Arabo-africain d’origine. Elle est artificiellement subdivisée en 18 ethnies et parle un même langage, le malagasy, avec différentes intonations dépendant de la région de localisation.

À l’instar de la plupart des pays en quête d’un développement harmonieux et durable, Madagascar a connu différents types de gouvernance politique et économique dont les résultats ont été jusqu’ici, tout simplement décevants sur le plan des performances globales. En effet, le pays se trouve encore aujourd’hui aspiré par la spirale descendante d’un dénuement sans précédent de la grande majorité de sa population.

À l’aube d’une nouvelle ère politique que vit le pays (la quatrième république), une question se pose alors: Madagascar est-il un cas désespéré ? Quelle voie suivre pour la ramener sur les rails d’un développement harmonieux et durable ?

La présente réflexion tente d’apporter un début de réponse à ces questionnements en : (i) prenant connaissance des réalités socio-économiques du pays ; (ii) identifiant les principales sources des problèmes auxquels le pays est confronté et (ii) proposant des pistes de solution pour y remédier.

Figure 1 : Localisation de Madagascar en Afrique (Bibliothèque Nationale de France)
2. Madagascar : une trajectoire de développement peu reluisante

Classé 151ème sur 186 pays par le Programme des Nations Unies pour le Développement (UNDP, 2013) en ce qui concerne le développement humain, 92,6% de la population malagasy vivent avec moins de 2 USD par jour et 81,3% vivent avec moins de 1,25 USD par jour (University of Oxford, 2013).


Selon une étude de la Banque mondiale sortie en 2013 : (i) ces vingt dernières années, la performance économique de Madagascar a été très mitigée. Le pays figure parmi les 19 pays au monde ayant connu une crise économique cumulative sur la période et est classé comme le « pays le moins performant parmi les pays du monde qui sont en paix »; (ii) la pauvreté est partout, d’une ampleur désolante et sans aucun signe de fléchissement tant la croissance économique du pays est faible; (iii) les cinq dernières années ont certes accentué l’effondrement de l’économie du pays, mais elles ont également mis en lumière les véritables tenants et aboutissants de cette situation déplorable.

(iii) le manque de financement a ralenti les activités économiques se traduisant par une forte diminution des investissements publics, notamment ceux relatifs aux travaux publics, avec les conséquences que cela a entraînées sur l’état des infrastructures économiques et sociales. Par ailleurs, la situation de l’emploi est devenue préoccupante en raison des pertes en masse d’emplois dues à la fermeture en série des entreprises franches, notamment celles évoluant dans le textile; (iv) l’état du secteur éducatif est inquiétant dans la mesure où les familles rencontrent des difficultés à envoyer leurs enfants à l’école. Comme conséquence, depuis 2009, le taux brut de scolarité au primaire diminue. Il en est de même pour les taux d’achèvement du primaire et au collège, ainsi le phénomène de la déscolarisation; (v) l’accès à la santé devient difficile. La population fréquente de moins en moins les Centres de santé de base (CSB) et le taux de couverture vaccinale diminue. L’accès à la santé s’est aggravé suite à la détérioration des infrastructures routières.

Face à ce constat sombre, les réactions restent contradictoires, mais avec toujours une certaine velléité de jeter les responsabilités sur les autres. L’on se demande alors s’il s’agit de la meilleure façon de réagir dans la mesure où la pauvreté est visible dans tous les coins et recoins du pays. Ne serait-il pas plus judicieux de se demander avec insistance pourquoi les options politiques en matière de développement appliquées jusqu’ici à Madagascar n’ont apporté que des résultats fort mitigés ?

3. La face visible de l’iceberg et les vérités bonnes à savoir

L’une des raisons qui justifient les problèmes rencontrés par le pays dans sa recherche de la meilleure voie pour un développement harmonieux et durable réside dans le fait que les politiques se sont toujours concentrées sur la résolution des quelques symptômes (la face visible de l’iceberg) au lieu de s’attaquer aux vraies sources des problèmes de développement que vit le pays.
Ces symptômes (Hallinan, 2013) se manifestent entre autres par: (i) la perte de confiance mutuelle (entre dirigeants, entre dirigeants et administrés, entre administrés) exacerbée par une recherche permanente de bouc émissaire face à une contre-performance ou un échec ; (ii) la banalisation de la corruption et de l’impunité ; (iii) l’hésitation des investisseurs sérieux à investir dans le pays ; (iv) l’amplification de la fuite des cerveaux ; (v) la dégradation du comportement au travail ; (vi) l’absence d’une culture politique de se soucier d’autrui et d’en faire l’édifi cation de la nation, et ce, au moyen de paradigme. Pour y parvenir, il faut refonder la citoyenneté pour en faire un des déterminants essentiels de son progrès. L’aptitude à se soucier d’autrui est le ciment de la société. Mais, en tant qu’éthique, elle suppose un changement de modèle inspirant ; (iv) l’insuffisance, l’absence voire d’informations fiables dans nombre de domaines pour une bonne prise de décision ; (v) l’insuffisance, voire l’absence, d’appui structuré aux (vrais) entrepreneurs ; (vi) l’absence d’une culture de la performance et (vii) l’incohérence des plans de développement élaborés, voire leurs inadéquations avec les réels besoins des communautés.

De par ces révélations, il peut être affirmé que la situation socio-économique que vit aujourd’hui Madagascar n’est pas surprenante. Toutefois, la situation n’est pas désespérée ; le pays a la possibilité de se ressaisir et se remettre sur les rails d’un développement harmonieux et durable, tant sa réussite dépendra surtout de sa capacité et de sa volonté d’adopter de nouveaux modes de pensée et d’action, évitant ce faisant de chaque fois « réinventer la roue » et « tout faire bouger sans rien changer ».

4. Les principales réorientations stratégiques à considérer

Se basant sur la problématique du développement de Madagascar, les orientations stratégiques suivantes sont à considérer pour parvenir un développement harmonieux et durable effectif :

S’atteler à la refondation de la citoyenneté. Madagascar étant une île et le fait qu’un peuple, uni dans sa diversité, y vit depuis des siècles, il est patent que ce peuple a un destin commun : celui de vivre ensemble de la façon la plus harmonieuse possible. Dans cette optique et dépassant la conception restrictive d’une survie purement matérielle, le peuple malagasy gagnerait à développer une capacité psychologique, spirituelle et politique de se soucier d’autrui et d’en faire l’un des déterminants essentiels de son progrès. L’aptitude à se soucier d’autrui est le ciment de la société. Mais, en tant qu’éthique, elle suppose un changement de modèle inspirant ; (iv) l’insuffisance, l’absence voire d’informations fiables dans nombre de domaines pour une bonne prise de décision ; (v) l’insuffisance, voire l’absence, d’appui structuré aux (vrais) entrepreneurs ; (vi) l’absence d’une culture de la performance et (vii) l’incohérence des plans de développement élaborés, voire leurs inadéquations avec les réels besoins des communautés.

Planifier autrement le développement en considérant la population à la fois comme artisanet et bénéficiaire du développement. Une bonne stratégie de développement repose sur l’idée rationnelle selon laquelle le développement ne peut être réalisé que par la population elle-même, grâce à sa participation efficace et volontaire aux diverses activités de production. Il est donc nécessaire de réunir toutes les conditions favorables permettant à la population d’assumer son double rôle d’artisan et de bénéficiaire du développement. Dans cette optique, la démarche d’une planification de proximité (approche participative et multisectorielle) s’avère des plus indiquées. En effet, les vrais besoins de la population et les stratégies les plus appropriées pour les satisfaire ne pourront être bien déterminés qu’à travers une implication effective de celle-ci au processus de planification. Il en est de même pour la mise en œuvre de manière
effective des différents programmes retenus en conséquence.

Considérer autrement la variable population. Une différence de chiffres peut entraîner une énorme différence de la qualité de vie dont jouiront les générations futures. En effet, si le rythme de la croissance de la population de Madagascar se maintient, chaque communauté (ville, quartier, village …) devra doubler l’ensemble de son infrastructure sociale tous les 20 ans afin de maintenir la situation actuelle déjà jugée peu satisfaisante. Les investissements effectués dans tous les domaines seront en grande partie épongés par la démographie qu’il s’avère difficile pour le pays de tirer profit du dividende démographique. Ainsi, un gouvernement responsable doit, entre autres, déterminer si les taux de croissance démographique, de migration ou de répartition de la population sur le territoire, sont acceptables. Mais, pour faire évoluer ces paramètres, il doit élaborer des stratégies adéquates.

Mobiliser les forces sociales. Désormais, les organisations de la société civile doivent jouer pleinement leur rôle de véritable facilitateur du changement social, levier fondamental pour le développement harmonieux et durable du pays. Pour ce faire, les modes d’intervention de la société civile dans la vie publique doivent être régis par une nouvelle forme de contrat social qui précisera sa logique et développera les conditions d’organisation et de fonctionnement de ses points d’application.

Coordonner, suivre et évaluer efficacement les interventions. La coordination, le suivi et l’évaluation doivent être la culture et l’état d’esprit devant animer tous les acteurs du développement dans leurs interventions.

5. Cadre conceptuel pour un développement harmonieux et durable

Pour disposer d’une qualité de vie améliorée et d’un bien-être, chaque homme a besoin d’un toit, de quoi se nourrir et se vêtir, ensuite être en bonne santé, avoir une bonne éducation, pouvoir jouir de la libre circulation de sa personne et de ses biens, avoir l’opportunité de montrer ses capacités à créer, etc. En retour, il a le devoir, entre autres : (i) d’avoir un comportement civique empreint des valeurs attachées à la citoyenneté qui lui est reconnue de plein droit; (ii) de respecter ses concitoyens dans leurs droits fondamentaux; (iii) de contribuer par le paiement de l’impôt au fonctionnement de l’État, que ce soit pour l’entretien de la force publique ou de son administration…

Autant de composantes d’un développement harmonieux et durable effectif qui font, d’ailleurs, l’objet des interventions des différents projets d’envergure en cours à Madagascar. Malheureusement, les zones d’intervention de ces projets se trouvent éparpillées sur l’étendue du territoire national. Rares sont les communes, voire les districts, où ces différents projets sont présents à la fois alors qu’ils convergent vers le même but : améliorer de la qualité de vie et rechercher un bien-être de la population malagasy. Pour y remédier, il apparaît judicieux que le développement harmonieux et durable de Madagascar se fasse par la substitution de l’approche projet, actuellement préconisée, par une véritable approche programme. Ainsi, considérant l’ampleur de ses contre-performances économiques et la manière dont les programmes de développement successifs ont été gérés depuis son indépendance politique, il apparaît que Madagascar n’a plus vraiment d’autre choix que de mettre en œuvre ce

Figure 3 : Cadre conceptuel pour le développement harmonieux et durable de Madagascar
Développement national

que ses dirigeants n’ont appliqué que mollement, voire tout simplement évité : un développement réel à la base sous-tendu par une approche programme effective. Dans cette perspective, la commune doit être le centre de gravité du développement harmonieux et durable de Madagascar.

Il importe de noter que le développement à la base est un processus grâce auquel la communauté participe au façonnage de son propre environnement dans le but d’améliorer la qualité de vie des citoyens. Une démarche qui nécessite une intégration harmonieuse des composantes économique, sociale, culturelle, politique et environnementale (Gagnon, n.d.).

Dans cette perspective, pour le cas particulier de Madagascar, la composante économique devrait devenir la priorité vu l’importance et l’urgence pour chaque Malagasy d’être en mesure de gagner sa vie et de subvenir de manière satisfaisante à ses besoins. Dans cette optique, le processus à poursuivre doit utiliser les initiatives entrepreneurielles locales comme moteur du développement économique (Business-driven Municipality). Il s’agira, entre autres, de : (i) valoriser localement les ressources existantes et potentielles en vue de produire des biens et services capables de satisfaire les besoins du marché local et des marchés lointains (district, régional, national et international) en mettant en valeur les compétences des producteurs, des commerçants, et les caractéristiques des produits travaillés ou fabriqués (qualité/ prix…); (ii) diversifier les activités en cherchant la meilleure combinaison des compétences et potentialités des différents opérateurs permettant la réalisation de revenus conséquents élevés qui vont permettre la programmation et la réalisation de nouveaux investissements économiques et sociaux créateurs d’emplois nouveaux et (iii) favoriser l’enrichissement des activités par une multiplication des échanges entre les unités de production en vue de rechercher une intégration économique capable de soutenir la création d’un tissu d’activités interactives.

Toutefois, il importe de noter qu’aucun enjeu majeur du développement ne peut être traité à une seule échelle. L’interaction entre les différents niveaux (local, district, régional et national) de la pyramide administrative est essentielle pour la cohérence de l’élaboration, la mise en œuvre, le suivi et l’évaluation d’un programme de développement, comme démontré dans le cadre conceptuel (figure 3).

6. Conclusion

La situation actuelle de Madagascar exige que la classe politique et les membres de la société civile adoptent un nouveau mode de pensée assorti d’une vision claire à long terme. Ils doivent oser entamer le vrai changement en favorisant et en conduisant avec hardiesse et imagination une révolution dans la façon de gérer le développement du pays. Une telle révolution impliquera de nouvelles méthodes de travail. Par ailleurs, il faut chercher à la fois un climat politique et des institutions capables de permettre à tous d’exercer leur pouvoir propre, la participation étant un élément central de l’interaction sociale à tous les niveaux.

Références

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Located to the south of the Equator, in the Indian Ocean, Madagascar is the fifth biggest island in the world (529040 km²), behind Australia, Greenland, New Guinea and Borneo, and is separated from the African continent by the Mozambique Channel. The west coast of Madagascar and the Mozambican coasts are approximately 400 km distant from each other and the neighbouring islands of Madagascar are the Comoros (300 km to the north-west), Reunion (800 km to the east), Mauritius (800 km to the east), and the Seychelles (850 km to the north).

In 2010, the Malagasy population was estimated around 20.8 million people, 20.3 % of whom lived in urban areas, and 79.3% in rural areas. This population is made up of a mix of Malayo-Indonesians and Arab-Africans. It is subdivided into 18 ethnic groups and uses the same language, Malagasy, with variations in intonation, depending on regional belonging. Like most countries in search of sustainable and harmonious development, Madagascar has experienced different types of political and economic governance which have until now been disappointing with regard to global performances. Indeed, the country has until today been drawn into a downward and unprecedented spiral of destitution affecting the vast majority of its population.

At the dawn of a new political era that the country is currently witnessing (the fourth Republic), it remains to be seen whether Madagascar is a hopeless case. What way to pursue to bring it back on track for a harmonious and sustainable development?

The present reflection will try to offer the beginnings of an answer to these questions by (i) taking stock of the socioeconomic realities of the country, (ii) identifying the main sources of problems with which the country is faced, and (iii) mapping a way forward to remedy these problems.
Measuring multidimensional poverty: The case of the Seychelles

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In this paper, we propose a new approach to measuring multidimensional poverty based on a mix of objective and subjective information about household living conditions, and on how these households view their spending priorities. The typically used multidimensional poverty indicators in the literature do not appear to be relevant for middle-income countries like Seychelles and can yield unrealistic estimates of poverty because of the better living conditions. The empirical results based on our new approach show that a small but non-negligible minority of Seychellois can be considered as multidimensionally poor. Gender issues are investigated by contrasting the structure of multidimensional poverty across households respectively led by male and female heads, which show some poverty-bias against female heads in this country. This may be on account of the ambiguity of the notion of household head in the survey and calls for further investigation.

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Résumé

A travers cette communication, nous proposons une nouvelle approche pour établir le niveau de la pauvreté multidimensionnelle, en nous basant sur un ensemble de données objectives et subjectives se rapportant aux conditions de vie des ménages et sur la façon dont ces familles perçoivent leurs priorités en matière de dépenses. Les indicateurs de pauvreté qui sont couramment utilisés dans la littérature existante ne semblent pas être applicables aux pays à revenus moyens comme les Seychelles et peuvent produire des estimations de la pauvreté qui sont loin de la réalité en raison des meilleures conditions de vie qui y prévalent. Les résultats empiriques basés sur notre nouvelle approche démontrent que, bien qu’étant non-négligeable, un petit nombre de Seychellois peuvent être considérés comme étant pauvres d’un point de vue multidimensionnel. Les questions de genre sont examinées en contrastant la structure de la pauvreté multidimensionnelle à travers les ménages qui sont dirigés par des chefs de famille masculins et féminins respectivement, un exercice qui révèle l’existence de préjugés liés à la pauvreté à l’encontre des chefs de famille féminins aux Seychelles. Une telle situation peut s’expliquer par l’ambiguïté qui a entouré la notion de chef de famille au cours du sondage, et elle requiert, donc, des examens plus poussés.
The briefest glance at today’s global tourism industry tells us that it continues to evolve at a rapid pace as the Internet, social media, e-marketing and increased inter-connectivity between peoples at all levels of society are bringing about change at an unprecedented depth, pace and intensity.

There is practically no area of human endeavour that has remained untouched in this helter-skelter ride on the back of these ever-burgeoning technologies which create fantastic opportunities (as well as challenges) in this brave new world we are entering.

As a classic example of a people-oriented industry, tourism (upon which many of our economies depend to a greater or lesser extent), continues to experience profound change, forcing us to re-evaluate our approach to what makes our respective destinations attractive to consumers and which tactics and channels we use to get that message across in the ever-more crowded, global market place. Tourism is highly organic in nature, responding to the minutest stimuli, positive or negative, from across the globe and to survive as a destination necessitates being extremely flexible and ever prepared to think out of the box.

Less than two decades ago, Seychelles, just to take one example, was very more static in terms of the positioning of its tourism, much relying on its sun, sea & sand ticket to attract visitors to its shores. Today, the situation is very different indeed as better-informed, more tech-savvy, travellers with higher expectations of their holiday experience, seek to get beneath the skin of the country they are visiting and to return home culturally enriched by the experience.

Whether we realise it or not, we are all being transformed by this dynamic and by what it bodes for our increasing interconnectedness and for the terrain we must navigate in the future.

We are all discovering that, in order for our tourism to remain attractive to this new generation of clued-up, increasingly discerning, globe-trotters, we must exploit the wider set of our destination’s attributes, digging into our respective cultures to lend travellers a fresh perspective on all that we have to offer. At no point can we afford to rest on our laurels because the tourism upon which so many of us depend is always in a state of flux.

Another transformative aspect of today’s brand of tourism is the cross-border approach. We live in a world where not even an island can afford to be an island unto itself and where effective partnerships are the new currency as we have, for example, just witnessed with the recent 4th edition of the Carnaval International de Victoria, now co-hosted by Seychelles, Madagascar, Mayotte, La Reunion and South Africa’s Kwazulu Natal.

Here is a clear example of states which may once have considered themselves as rivals in tourism, coming together in an initiative to market, not only themselves but their region. Another is the East3Route cross-border tourism investment initiative between Mozambique, Swaziland, Kwazulu Natal, and now Seychelles, which looks to encourage cross-border tourism and tourism-related investment between member states.

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These forms of synergy and collaboration between neighbours and erstwhile rivals, bear a clear message of the benefits of co-operation in the global marketplace and the potential for transforming lives across entire regions through joint tourism initiatives.

We live in an age when ‘going it alone’ is becoming increasingly difficult as competing brands join forces in order to be able to advance together where it might be more difficult, or perhaps even impossible, to go alone. One look at the aviation industry shows how this concept of doing business is gaining traction and how the lone operator is finding it difficult and in some cases impossible to survive as competitors team up to achieve greater market share.

As the new kid on the block of Indian Ocean Tourism, the Vanilla Islands concept is the result of an affiliation of regional island nations: Seychelles, Madagascar, La Reunion, Mauritius, Comoros and Mayotte, who have formed an exciting new travel destination brand. Created in La Reunion on August 4th 2010, the aim of this co-operation is to jointly market the region rather than each member ‘going it alone’, as has been the case in the past.

Vanilla is just one aspect of the common heritage joining these islands which, together, offer astonishing diversity to regional travellers. With each island boasting unique attributes, it is only logical that they should market the way they complement each other with a unique combination of itineraries featuring the very best that the Indian Ocean has to offer.

The Vanilla Islands plans to offer unique advantages such as enhanced visa-free travel between the islands as well as an improved transportation network. Also, closer cooperation between the tour operators, hotels and authorities of the islands and a homogenous marketing strategy. The Vanilla Islands is the Indian Ocean coming alive as one very attractive, interconnected entity offering a kaleidoscope of attractions to the discerning traveller.

While opportunities are there in abundance, there are challenges as well. The viability of the Vanilla Islands depends much on the effectiveness of inter-island connectivity, either by air or by sea, and several member states are now working to get that aspect of the operation off the ground. As the foundation of transportation is laid, so ease of access of each one of these islands will become paramount to allow for hassle-free travel between the islands. It also relies on the region remaining stable, which is the prerequisite for the existence of any form tourism, as several countries worldwide are discovering.

As small island states, the Vanilla Islands are also vulnerable to such threats as climate change and globalization. There are two elements involved here: firstly, the islands’ ecological fragility and vulnerability to the intensifying, global pattern of natural disasters and secondly, the limited access of small island-state economies to external products and markets.

A further challenge is that small-island ecosystems appear to be highly susceptible to overuse and can rapidly become overwhelmed by the rapid and uncontrolled growth of tourism, tourism-related activities, and the activities which accompany the double-edged sword of development: residential development, commercial growth, infrastructure expansions, and the like. This calls for the urgent need for sustainability of the region’s tourism products to ensure that we do not ‘cut through the branch upon which we are seated’ and mortgage the long-term value of our individual and collective assets in exchange for short-term gain.

Tourism in the Indian Ocean is becoming a cross-border affair, mirroring the way that our world is increasingly doing business. Inter-state collaboration is beginning to replace narrow interests while a vision of the region as a whole is emerging which looks to join forces and maximise marketing efficiency in the ever-more crowded, global arena. The lone operator gradually being replaced by such partnerships is a world-wide phenomenon and one that looks to define a new brand of tourism in the western Indian Ocean, and perhaps even beyond, for years to come.

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L’île de La Réunion, autrefois île Bourbon, est située dans la partie sud-ouest de l’océan Indien, par 55° de longitude est et 21° de latitude sud, soit à 700 km de la côte est de Madagascar et 200 km du Tropique du Capricorne. La terre la plus proche est l’île Maurice distante d’environ 190 km. L’île est un volcan dédoublé de 7 000 mètres environ calé sur un point chaud de la croûte terrestre baptisée le Rift Nord 120. Elle ressemble à une carapace de tortue de 2 512 km² de superficie. Cette géographie est caractérisée par l’absence de ports naturels et de plaines littorales pénalisant l’île au temps de la marine à voiles et au temps moderne pour la desserte aérienne des gros porteurs. L’intérieur montagneux est déterminé par deux massifs volcaniques : le Piton de la Fournaise, volcan actif haut de 2 631 mètres dont les écoulations vont vers la mer et le Piton des Neiges, le sommet le plus élevé avec ses 3 070 mètres, dormant et démantelé par l’érosion pour former trois cirques d’effondrement (Mafate, Salazie et Cilaos), des plaines d’altitude (altiplanos), des pitons et des remparts vertigineux. Ce relief étagé avec ses altitudes et ses précipitations différenciées donne des microclimats, des terroirs et des paysages d’une grande diversité. Il complique certes le réseau viarie bitumé – d’une qualité exceptionnelle compte tenu des contraintes – mais produit un paradis pour les randonneurs curieux. Les voyageurs ont surnommé l’île « Helvétie tropicale ».

Sa localisation dans la zone intertropicale lui confère un régime climatique à deux saisons, l’une chaude et humide de novembre à avril avec des risques cycloniques et l’autre fraîche et sèche de mai à octobre. À plus de 1 200 mètres, on peut même distinguer les quatre saisons des espaces tempérés : les platanes de la Plaine-des-Palmistes perdent leurs feuilles au mois automnal de juin. Cette localisation liée au relief massif complexifie encore le visage de l’île avec un versant au-vent à l’est plus vert et plus humide et une partie sous-le-vent à l’ouest plus sèche et plus chaude. Cette morphologie volcanique et montagneuse a doté l’île de sources thermales, de stations climatiques d’altitude et de périmètres protégés floraux mais il l’a privée d’atouts balnéaires de vastes étendues de sable blanc et de lagons. Un littoral de 207 km à dominante falaises basaltiques ou grèves de sable noir ou de rocallle ne laisse que 27 km de plage de sable blanc convoités et sur-fréquentés.

Depuis le 19 mars 1946, l’ancienne colonie a choisi de devenir un département français, c’est-à-dire un bout de France et d’Europe dans l’océan Indien.
La France de l’océan Indien

Sauf pour une courte période entre juillet 1810 et avril 1815 pendant laquelle elle est anglaise, l’île a toujours été française depuis sa première prise de possession en 1638. L’île déserte est prénommée Bourbon depuis sa première prise de possession en 1638. Elle devient propriété de la Compagnie Française des Indes Orientales, fondée par Colbert en 1664. La Compagnie envoie dès juillet 1665 des engagés européens pour édifier un comptoir et une base logistique sur la route des Indes pour ses vaisseaux et ses équipages. Puis l’île renforce sa vocation agricole pour la production de denrées exotiques à forte valeur ajoutée au bénéfice exclusif de la France : café, épices, indigo, coton, sucre de canne, rhum, plantes à parfum et vanille.

Jusqu’en 1848, cette aventure agricole s’appuie sur un système de grande plantation adossée à l’esclavage des Noirs amenés d’Inde, d’Afrique et de Madagascar. À l’abolition de l’esclavage, le 20 décembre 1848, la demande de bras est satisfaite par l’arrivée massive de migrants sous contrats (enganisme). Aux Indiens succèderont les Malgaches, les Comoriens, les Mozambicains et les Somaliens, avant les Rodriguais, derniers engagés venus dans les années 1930 pour faire du sucre à La Réunion, nom définitif de l’île depuis 1848. Toutes ces femmes et ces hommes ont donné une population créole fortement métissée s’élevant en 2011 à 840 000 habitants, dont 41,3% de moins de 25 ans.

Depuis le 19 mars 1946 l’ancienne colonie a choisi de devenir un département français, c’est-à-dire un bout de France et d’Europe dans l’océan Indien. Cela n’a pas été sans difficultés dans les relations avec les pays de la zone, qui ont longtemps contesté le « caractère colonial » de la démarche. Cette spécificité confère à La Réunion une situation à part : un îlot d’opulence dans un environnement pauvre. Son Produit intérieur brut (PIB) par habitant est le plus élevé dans cette partie du monde : 17 700 euros contre 5 735 euros pour Maurice, 5 495 euros pour l’Afrique du Sud, 536 euros pour les Comores et 318 euros pour Madagascar (Sources : Banque mondiale, 2010). Son Indice de développement humain (IDH) est également le plus élevé de la zone : 0,914 en 2007, ce qui la situe à la 32e place du monde. L’espérance de vie à la naissance est de 75 ans pour les hommes et 83 ans pour les femmes (2009).

Mais c’est également une île de paradoxes, avec un chômage structurellement élevé : 29,5% de la population active en 2011, culminant à 60% pour les moins de 26 ans. Les moteurs de la croissance restent la consommation de type « pays avancé », soutenu par le tertiaire administratif et les transferts sociaux massifs de la France métropolitaine au titre de la solidarité nationale. L’ancienne filière canne-sucré est maintenue artificiellement par les aides européennes, mais pèse peu dans l’économie générale des emplois et des recettes. Quelle alternative pour l’avenir de cette île ? La valorisation des atouts naturels et culturels réunionnais passe par le tourisme, présent dans l’île depuis 1841 quand elle accueille pour un séjour de 45 jours son premier touriste connu : le poète français Charles Baudelaire.

Chaque occasion donnée de parler du tourisme et de l’île de La Réunion est bonne à prendre. Ne serait-ce que pour rappeler des évidences oubliées : La Réunion fut la première destination touristique de l’océan Indien, c’est-à-dire la plus ancienne et pendant longtemps la plus courue avec le thermalisme et le climatisme avant la mode du balnéaire maritime. Chaque opportunité de revisiter le tourisme est également à saisir pour rappeler d’autres évidences. Le tourisme c’est toujours et partout la même histoire. Une histoire de commerce de biens symboliques : le paysage, la température du bien-être au soleil ou dans la neige et l’insaisissable sensualité de la culture des hommes ; une culture faite de sonorités, de saveurs, de rythmes, de langues, d’art de vivre et d’aimer ! Ce commerce procure, comme tout achat, une griserie. Le tourisme

L’Association Région Sud Terres Créoles est une organisation non-gouvernementale (ONG) de droit français (Loi du 1er juillet 1901) agréée d’Éducation populaire fondée en 1982. Elle a pour objectif de relier autour de la culture historique et géographique communes les cinq îles-états de la zone sud-ouest de l’océan Indien membres de la Commission de l’océan Indien : Comores, Madagascar, Maurice, Réunion (France) et Seychelles. Financées par les pouvoirs publics français et le mécénat privé, ses actions d’animation et d’édition autour de l’éducation populaire ambitionnent de recruter des liens anciens distendus par les vicissitudes de l’histoire. Son siège social est situé au 9 rue Brunet, Le Chaudron, BP 90211 97493, Sainte-Clotilde cedex, La Réunion, contact@arstc.re ou www.arstc.re
Tourisme

Photo: Valériane Serviable

est le fait d’acheter et de vivre une autre vie que la sienne ailleurs pendant une durée limitée. C’est une histoire d’émotions devant la terre des hommes et devant les hommes de la Terre. Il n’y a de tourisme que d’agrément et ses ressorts sont le désir, la curiosité et le plaisir.

Le tourisme, c’est une histoire particulière avec la géographie, s’articulant autour du désir d’espaces et d’ailleurs ethno-climatiques. Le territoire et les hommes constituent sa « matière première », et le différentiel de climat et de culture son argumentaire de vente. Le tourisme repose aussi sur un malentendu et une transgression. Le malentendu fondamental qui régit les rapports touristiques découle d’une vision faite de fantasmes de voyageurs depuis Bougainville au XVIIIe siècle, repris par les publicitaires, et de décapsulation morale ; elle fait de l’île tropicale un inépuisable objet de perfection paysagère, habité par l’imprévisible spontanéité de populations bienveillantes et exubérantes.

Dans la zone intertropicale, depuis l’article « scientifique » de Commerson, médecin-botaniste du Roi, paru dans Le Mercure de France en novembre 1769 sur Tahiti (prénommée Utopie), toute l’île aurait génériquement lieu de bonheur et de plaisirs dédiés. Cette image, teintée de colonialité enrique, nourrie de généralités généreuses de lumières et de couleurs, est une pure invention européenne : c’est l’exotisme. L’île tropicale n’existe, dans sa tangibilité dominante, que par le regard rousseauiste de l’Européen. Ce jeu de la représentation ne repose pas seulement sur la machination de promoteurs de paradis parfaits ; il se déploie aussi sur la suspension volontaire du scepticisme sain du touriste, persuadé qu’il est un voyageur sensible et cultivé inventant son itinéraire.

Le tourisme des 3A : agrément, affinitaire, affaires

Que représente le tourisme pour La Réunion au début du XXIe siècle ? Au 31 décembre 2011, l’île disposait de 52 établissements hôteliers classés, avec 2 238 chambres, soit un recul de -15% par rapport à 2010. Les statistiques officielles parlent de 471 268 touristes. La durée moyenne de séjour est de 17 jours et leurs dépenses évaluées à 344,2 millions d’euros. Ces chiffres sont faussés par la comparaison avec les destinations concurrentes. Les discours ne font pas la différence entre les visiteurs, c’est-à-dire ceux qui viennent pour l’agrément, affinitaire, affaires. Cette vision comporte des incohérences, et le flou dans le traitement des chiffres empêche la comparaison avec les destinations concurrentes. Les discours ne font pas la distinction entre les visiteurs, c’est-à-dire l’ensemble de ceux qui débarquent aux aéroports, les voyageurs d’affaires, les touristes c’est-à-dire ceux qui viennent pour l’agrément (197 400 soit 42% des visiteurs) et les affinitaires, c’est-à-dire ceux qui viennent rendre visite aux parents et aux amis pour un mariage, un enterrement ou pour toute autre raison privée. Ainsi, les 400 militaires de la Compagnie Républicaine de Sécurité (CRS) venus pour rétablir l’ordre public en 1991 suite aux émeutes urbaines ont été comptabilisés dans les chiffres du tourisme.

Une île superlative

A La Réunion, frappée par le chômage de masse (29,5% de la population en âge de travailler en 2011), peut-on construire l’avenir des hommes sur du sable, du soleil, de l’eau et sur l’inconstance des modes de consommation de loisir des voyageurs européens ? Le tourisme ne peut assurer durablement le développement économique d’un espace et d’une société. Sa nature volatile y ferait peser trop d’incertitudes. En revanche, le tourisme est un indicateur du dynamisme économique et culturel d’un pays ; même s’il ne sera qu’une variable d’appoint, sensible aux aléas multifactoriels malvenus et à toutes les météos désastreuses du monde-économique, sociale et climatique. Alors que l’on peut se déplacer pour visiter un cimetière, un pays qui n’intéresse personne est un pays mort au monde.


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« la meilleure France » (Claude Wanquet). Que peut-on attendre des stratégies de combinaison avec les autres îles ? Les choix ont par essence des limites excluantes et le tourisme demeure, au gré des disponibilités des visiteurs, une activité concurrentielle. Et depuis 1967, avec l’Alliance Touristique de l’océan Indien (ATOI), aucune stratégie de complémentarité n’a durablement fonctionné. La Réunion semble un boulet : trop chère, trop loin, trop contraignante en règles administratives et policières diverses, trop fermée aux langues internationales et pas assez dépaysante. Est-ce à confirmer que La Réunion est une île irrémédiablement morte au monde des désirs ? Qu’elle sera perpétuellement une destination tracée, car les îles sont liées ?

**La Réunion de l’éternel Créole**


Le meilleur atout de La Réunion a toujours été la civilisation créole : la varangue entre le rhum arrangé et le café à la vanille, un monde sucré entre le bonbon-galabet et le miel vert, un long plaisir en bouche entre piment et cardamome, un mode de vie lent, capiteux et parfumé entre géranium et goménolé. Les hommes ne sont pas dans la nature, entre pitons, cirques et remparts ; ils ne s’appréhendent pas. Ils savent que La Réunion doit rester elle-même en évitant les pièges des représentations de la tropicalité insulaire : bleu dominant, pays bariolé, humanité anodine et négligeable. Il faut créer un écosystème favorable au tourisme. Il faut explorer la recomposition des turismes d’agrément, d’affaire et d’affinitaire en une destination complémentaire des 3R : rupture, ressourcement, retrouvaille. Il faut aménager les reflets d’une destination rendue clinquante par un trop-plein de mots et de clichés.

Avec ses cultures cumulatives et ses micro-terroirs différenciés, La Réunion offre au monde une géographie réjouissante. Il faut en toute simplicité proposer la réalité qui ne « surjoue » pas ce qu’elle est vraiment : le modèle le plus achevé au monde de la cohabitation d’hommes de cultures, de couleurs et de croyances différentes dans un espace partagé et dans une histoire commune. Ce modèle est ancien et a été découvert en 1841 lors du séjour du poète Charles Baudelaire ; il a été consigné dans “L’Invitation au voyage”, poème de son recueil Les “Fleurs du Mal” (1857).


Ce marché français existe pour La Réunion ; il est là à portée de main et de marketing : ce sont les Réunionnais. Il peut également être sollicité pour les autres destinations-vanille.

**Avec ses cultures cumulatives et ses micro-terroirs différenciés, La Réunion offre au monde une géographie réjouissante.**

**Abstract**

In this article, the authors question the pertinence of tourism as a cultural and economic asset for Reunion, an island with so many distinctive features articulated around its active volcano, breathtaking green and rugged landscapes for lovers of hiking, extreme temperatures, climatic and seasonal manifestations, as well as the many inland activities of its calderas, as opposed to the neighbouring islands and their focus on coastal charm. Key issues are brought up, such as the overexploitation of scarce beach areas despite the sustained national efforts in favour of environmental protection in other areas, the acute unemployment problem facing the island, the costly living standards, air connection shortages at particular moments of the year, and the difficulty of ascertaining with precision the number of tourists coming to this French territory of the Indian Ocean. The authentic Creole identity of the island is also brought up and in particular its blending with the strong cultural and mercantile influences from France perceptible among the islanders and their lifestyle that is so typical of high income society realities. Against such a complex backdrop, is the emergence of a regional policy for tourism around the “Vanilla Islands” concept the solution to enable the real lift-off of this economic sector in Reunion? The authors conclude by pointing out that the number one strength of this island remains its people and that efforts for the valorization of the tourism sector in Reunion should undoubtedly focus on the economic potential that French visitors represent.
At a conference held in Seychelles, in April 2007, island scholars came together to reflect on issues of cultural diversity in small island developing states. One product of these reflections, a book entitled Islands as Crossroads, Sustaining Cultural Diversity in SIDS’ (UNESCO, 2011) recounts some of the complexities experienced by small island societies. One proposition forwarded by the book is that ‘all islands, from all regions…(have) important stories to tell of the central role of diverse cultural interactions, both past and present, in the very fabric of their societies’ (Curtis in UNESCO, 2011, p15). Fuma (UNESCO, 2011) tells his story in the book. His story is one of memory and cultural diversity in the western Indian Ocean, and concludes by calling for further research into the dynamics of ‘creolizations’. He suggests such research should be guided by questions like: on what basis can we define creolization and what criteria could we use to characterise ‘Creole-ness’? (Fuma in UNESCO, 2011, p63). In order to grapple with these important questions and continue the discourse on island identity, this article first addresses the idea of cultural difference and dispute. The article then explores the notion of créolité as being both product and process of the constant cultural mediation that takes place everyday in island communities and beyond.

Cultural disputes happen when people seek refuge in cultural ‘havens’, fearful of what may lie beyond seemingly fixed cultural boundaries (Pieterse, 2001; Khan, 2007). When the free flow of culture is resisted, in preference for a retreat toward cultural sources (roots or legacies), cultural exchange is foreclosed. Opposing forces pressing for cultural integration and homogeneity can offset this tendency for cultural separatism, or heterogeneity. Homogenising forces may take many forms, such as the westernisation or Americanisation of culture, involving the global spread of neo-liberal, capitalist culture or corporatism, or the growing influence of Christian or Islamist dogma, or even the melting/blurring of cultural boundaries to produce a blended, indistinct cultural soup. In efforts to resist these powerful forces of cultural imperialism, certain groups may choose to essentialise their non-American or non-Anglophone or non-Christian etc. cultures or even choose to embrace a more complex, dynamic cultural mélange. In this last scenario, the cultural mélange or hybrid culture is open to exchange, shifting in character and flavour.

The making and re-making of hybrid cultures, in part response to the limitations of a western imagination (Hall, 1996:623), is an expression of the dialectic between cultural convergence and divergence. Within this dialectic, spaces are created for new hybrid relations to emerge, where culture may be ‘creolized’ and complex identities formed (Hall, 1996:623). Historically, colonialism proved to be one of the most powerful vehicles for cultural mixing. More recently however, globalisation, especially supported by new
mobile digital technologies, has led to an explosion of cultural meetings, exchanges and border crossings (Giroux, 2005; Elliott & Urry, 2010). While cultural convergence or integration, in the face of globalisation, may seem inevitable, the movements for greater cultural essentialism and differentiation work to defy this inevitability. In trying to understand how different cultures respond to the dialectics of globalisation, Appadurai (1996: 187) has called for a theory of ‘inter-contextual relations’ or, more simply, a theory of globalisation analysed from a socio-cultural viewpoint.

Attempts at a theory of inter-contextual relations need to resist the temptation to exoticize or romanticize multiculturality and cultural diversity (Haring, 2005: 302). Rather, cultural relations, within the contexts of globalisation, neo-colonialism, postcolonialism and postmodernism, should be regarded as on-going translations and negotiations, where hybridity is placed at the ‘cutting edge’ of these negotiations (Bhabha 1994:38). The cutting-edge or the border-edge is, for Bhabha (1994), the ‘in-between’ space or the third space where culture is negotiated in terms of its agency, practice, power and context (Khan, 2007: 665). Negotiations over power, agency etc. will be ambivalent but, on certain occasion, they may become antagonistic and can even turn violent (Hall 2000: 226). In these ‘in-between’ spaces, where dialogue, improvisation, exchange and sometimes violence, take place, new hybrid cultures are constructed and identities reconfigured (Knepper 2006:83).

The reconfiguring of identities is part of the dynamic process of adapting to cultural diversity (Knepper 2006: 79). This process, sometimes called ‘creolization’ or ‘bricolage’, leads to the making of new, multiple identities or créolité (Knepper 2006: 79). The islands of the Caribbean, for instance, are sites that symbolize both the product (créolité) and the process of creolization (Confi ant, n.d. in Knepper 2006: 72). The making and re-making of new identities is not, however, a testimony to the project of harmonization (Haring, 2005: 299, Medea, 2002: 125). As Eriksen (1998) shows in his study of Mauritian identities, a ‘single’, harmonious Mauritian identity is qualified by interethnic marriage, consumerism, the globalized labour market, tourism and migration. Instead, Knepper (2006: 85) prefers to view creolization as the ‘improvisatorial, adaptive’ manoeuvre to mitigate the negative forces of colonization. Through this adaptive re-birth, new possibilities for radical discourse and critical engagement are opened up. This utopian view of creolization is problematic however, not least because it rests on the notion that the construction of multiple identities is an enriching process, rather than a traumatic one.

Controversies around concepts such as hybridity and creolization are part of the wider debate about the ‘political potential and epistemological usefulness’ of postcolonial theory (Kraidy, 2002: 316). The emancipatory promise of postcolonial theory rivals the belief that postcolonialism, as an argument, has been colonised by academics and exists only in academia (Spivak 1999: 361). Despite the rhetoric, the lived experiences of hybridity and creolization, which Knepper (2006: 71) refers to as the practices and ethics of cultural borrowing and accepting to be culturally transformed, are very real. Haring (2003:32) adds that these Creole practices of borrowing and transforming, while seemingly continuous and on-going, conceal the violence of colonial history. The trauma of slavery, social engineering, colonialism and neo-colonialism are contained within the processes of creolization and should not go unrecorded. Clues to the bitter colonial legacy of creolization are found in the word ‘creole’ itself. The term ‘creole’ derives from the Latin ‘creare’ (‘create’) or ‘to create anew’ (Cohen, 2007: 371). According to Cohen (2007: 371), the most common historical use of ‘creare’, or ‘criollo’ in Spanish, was to describe the children of Spanish colonizers born in the ‘New World’. The French transformed the word to ‘creole’ and this term became synonymous with any white person born in the colonies. This race-based definition shifted, explains Jolivet (in Cohen, 2007: 371), as early as 1722, when distinctions were made between ‘Creole slaves’ and ‘traded slaves’.

To talk of a Creole national identity, founded on a colonial legacy, is, for Khan (2007: 670), a flawed exercise. Grouping people under the title ‘Creole’ assumes a shared identity that, today, simply may no longer exist. The more likely criterion, for aligning diverse groups of people living on small islands in the Indian Ocean and Caribbean, is language-based. Speaking a form of Creole/Kreol language may, in effect, be the only common cultural denominator. Building a national identity based on Creole/Kreol language alone is, however, extremely difficult, especially in the absence of a strong political will. In Reunion, for example, the population has ‘invented’ a form of creolisation around which diverse groups may coalesce (Medea, 2002: 126):

- Yab or petit blanc: Christian descendants of the érst white French people
- Kaf: black Afro-Malagasy and Christian descendants of slaves;
- Creole or Metis: mainly mixed race and Christian;
- Malbar or Tamil: Tamil Hindu and mostly Christian;
- Zarab or Tamil: Tamil Hindu and mostly Christian;
- Zorey: white metropolitan and Christian;
- Chinois: mostly Buddhist and Christian;
- Zorey: white metropolitan and Christian;
- Gros blanc: rich white Christian, landowners, ex-slave masters;
- Malagaches: emigrants from Madagascar and animists;
- Komor: black Muslim emigrants from Comoros and Mayotte islands.

The more likely criterion, for aligning diverse groups of people living on small islands in the Indian Ocean and Caribbean, is language-based.
This loose collection of peoples, assembled under the Creole banner, conflicts with Reunion’s official French identity, which, until very recently, relegated the creole language to informal, unofficial status. Boswell (2005) recounts the similar position of creole people in Mauritian society. The Mauritian government officially recognizes four population categories: Hindu, Chinese, Muslim and ‘general’, with Creole placed in this ‘general’ melting pot while Hindus, Chinese and Muslim communities are awarded a more distinct identity. A thin ‘veneer’ of peaceful social relations masks, says Boswell (2005: 201), deep underlying racial and religious tensions that can occasionally come to the surface. In the aftermath of racially aggravated riots in 1999, the government made attempts to ‘essentialise’ Creole identity (Boswell, 2005: 213). Public discussion focused on the nature of Creole identity and history and firmly anchored these in a slave past. Relegated to history, those identifying with créolité feel, argues Boswell (2005), devalued and find it difficult to celebrate their identity in contemporary ways. The devaluation and negation of créolité lies at the heart of what Boswell (2005) calls ‘le malaise créole’.

Despite the inherent difficulties of ‘essentialising’ creole, Seychelles has attempted to build a sense of national identity around Kreol. In 1978, during the period of socialist one-party rule, post-independence, the orthography of Seychellois Kreol was standardized and elevated to official language status. People were encouraged not only to pen their oral histories but also to revise and renew them in order to ‘create a national folklore’ (Dorson, 1971 in Haring, 2005: 301). A representation of Kreol culture and language was used, for socio-political purposes, to build a sense of nationalism and common identity. Re-creating a modern créolité, in terms of producing something new and distinctive involves, however, uprooting some of the elements that tie culture to its past. Separating from certain aspects of past cultures or identities can be both painful and liberating, and fraught with contradiction. One example of the paradoxical nature of modern Seychellois identity is the apparent rejection of an African identity (“Mon en Kreol, mon pa en Afriken”) coupled with a concerted effort to celebrate the continent through events such as Fet Afrik. Choppie (2012) notes that many ‘Seychellois people … prefer to state that their ancestors came from Madagascar rather than from Africa, because Madagascar is not as black as Africa’.

Acts of denial and rejection of certain identities form part of a complicated cultural transition for societies whose history of slavery and colonialism is still relatively raw. The repositioning of legacies and cultural traditions is one of the constant dilemmas those with multiple, creole identities face. The Caribbean writer V. S. Naipaul, has explored this very dilemma in many of his books. Naipaul writes about torn identities. His novels explore the cultural complexities of trying to be something that you are not and the impossible search for belonging and rootedness.

The fear of being rejected by those who claim to be of purer origin paralyses the creole (Cohen, 2007: 379). The self-doubt and fear that characterises the people of Fanon and Naipaul’s work is countered by the more optimistic celebration of impurity found in much of Salman Rushdie’s writing. Cohen (2007) explains that Salman Rushdie’s The Satanic Verses celebrates hybridity and attacks traditional and ascribed social identities. Rushdie sets out to explicitly attack the notion of authenticity and singular, monochromatic identities, in much the same way that postcolonialists reject the ideas of a single Truth and a ‘Pure way’ (Cohen, 2007: 301). Rushdie (1991: 394) himself says of The Satanic Verses: Those who oppose the novel most vociferously today are of the opinion that intermingling with different cultures will inevitably weaken and ruin their own. I am of the opposite opinion. «The Satanic Verses» celebrates hybridity, impurity, intermingling, the transformation that comes of new and unexpected combinations of human beings, cultures, ideas, politics, movies, and songs. It rejoices in mongrelization and fears the absolutism of the Pure. Mélange, hotchpotch, a bit of this and a bit of that is how newness enters the world. It is the great possibility that mass migration gives the world, and I have tried to embrace it. Rushdie (1991: 394)

If cultural identity is in a perpetual state of translation and negotiation, then ‘all forms of culture are in a continuous process of hybridity’, argues Homi Bhabha (1994:38 in Cohen, 2007:381). The hybridity argument forecloses any essentialism of ‘prior given or original culture’, which can, as Rushdie admits, weaken those who depend on ‘essentialist’ positions. For disempowered groups that struggle to be recognized, it may, however, be strategically advantageous to temporarily ‘essentialize’ their culture or identity in order to achieve certain goals. This tactic, which Spivak calls strategic essentialism, sees groups forming temporary allegiances even when strong cultural differences may exist between such groups. Though deeply flawed, the ‘essentialisation’ of Creole may occur so that those who feel trapped within
‘third spaces’ are able to conjure up the courage to ‘talk back’ to those who occupy ‘first spaces’ (Cohen, 2007: 382). Alternatively, aspects of Creole culture may be essentialised so they can be more easily appropriated and sold as ‘authentic’ cultural artefacts and experiences to tourists (Low, 2011: 81-82).

Bernabé, Chamoiseau, and Confiant (1990) in their praise of Creoleness, explained that creole culture is a challenge for the imagination, partly because, as they affirm, it rejects a ‘false universality’ (p892) but also because it resists the powerful and seductive desire to be branded or to be pigeonholed. Bernabé et al. (1990: 886) recognized créolité’s ‘exteriority’ complex, where creole culture is seen through a colonial and/or western gaze, defined from the ‘outside-in’, but they also asserted that Creoleness is made and re-made during the UN SIDS Conference in Samoa 2014, can help small islands unravel and make sense of their inherently complex and often contradictory expressions of culture and identity.

Résumé

La recherche d’une identité ilienne donne lieu à de profonds examens de conscience, lorsque les protagonistes font face à des questions vitales qui se rapportent à la mémoire, au passé, au futur, et au sens d’appartenance. Bien que la notion de créolité demeure un élément vital dans la construction et la reconstruction d’une identité ilienne, la question est de savoir comment définir cette identité. Cette communication succinte s’attaque à la problématique en prenant en considération les multiples forces concurrentielles qui façonnent la créolité. En tant que culture « hybride », la créolité occupe un tiers espace, étant contrainte de se renégocier en permanence, une manœuvre perpétuelle qui peut être, à la fois, émancipatrice et traumatisante. Les efforts en vue d’essentialiser le concept du « créole » sont ici discutés et leur assise est établie comme étant fondamentalement biaisée. En contrepartie, nous options pour une notion de la créolité qui est par nature complexe et chaotique, dans l’espoir de parvenir à une interprétation plus poussée de la condition créole.

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Les Mascareignes, îles à poètes :
Bref panorama de la poésie francophone et créolophone
de Maurice et de La Réunion

Par Patryck Froissart, Poète, St Paul, Ile de la Réunion

La Réunion et Maurice, deux îles formant avec Rodrigues l’archipel des Mascareignes, dans l’océan Indien, terres de colonisation récente (17e siècle), riches de cultures et d’influences diverses, ont produit, particulièrement dans leurs composantes francophone et créolophone, des poètes talentueux de grande renommée.

Cet article recense, de façon non exhaustive, les principaux auteurs qui ont marqué l’histoire de la création poétique dans les Mascareignes, et repère quelques-uns de ceux qui la font vivre actuellement.

Pour les grands navigateurs européens lancés à partir du XVe siècle à la découverte de ce qui était pour eux le nouveau monde, la rencontre avec les îles tropicales, habitées ou non, fut la plupart du temps source d’éméveillement. Nombreux furent ceux qui crurent avoir retrouvé le paradis perdu en leur flore luxuriantes, leur faune étrange, leur douceur climatique.

La vision ethnocentrique qu’ils eurent de la vie quotidienne des insulaires qu’ils y découvrirent, lorsque ce fut le cas, et qu’ils traduisirent en termes de nonchalance, d’indolence et d’innocence, fut la source d’une prolifération d’écrits sur la culture du « bon sauvage » préservé des travers décadents et pervers de « l’homme civilisé », dont les plus retentissants furent, parmi tant d’autres, dans la littérature francophone, les Dialogues avec un Sauvage, du baron de La Hontan, et le Supplément au Voyage de Bougainville, de Diderot.

Les Mascareignes n’échappèrent pas à cette représentation philosophico-littéraire du caractère édénique auquel le roman pastoral de Bernardin de Saint-Pierre, Paul et Virginie, a donné un tel retentissement mondial que nombreux sont ceux qui croient aujourd’hui en la vérité historique de ce récit et en l’existence réelle de ses deux personnages principaux…

Dans un tel contexte, il n’est guère surprenant que les îles Mascareignes ont été, très tôt après leur colonisation, des îles à poètes. Votre île n’est-elle pas aussi une terre toute de poésie, terre nouvelle pour les arts, terre qui peut inspirer des pages éloquentes, des tableaux remplis de beautés pittoresques et de vérités sublimes, de descriptions fidèles et gracieuses, dont chaque ligne sera un hommage rendu à la patrie?

Dès le XIIIème siècle, La Réunion et Maurice donnèrent ainsi à la poésie francophone et créolophone des créateurs de talent. Citons-en, dans un ordre chronologique approximatif, les principaux :

**XVIIIème et XIXème siècles** :
Pour La Réunion : Etienne Azéma, Leconte de Lisle (chef de file du mouvement des poètes français) du Parnasse, Evariste de Forges de Parny, Antoine Bertin, Eugène Dayot, Auguste Lacaussade, Léon Dierx, Célimène Gaudeux (poétesse autodidacte surnommée La Muse de La Saline)…
Pour Maurice : Léoville Lhomme, Charles Gueuvin…

**XXème siècle** :
Pour La Réunion : Pierre-Claude Georges-François…
Pour Maurice : Raymond Chasles, Jean-Georges Prosper, Jean Fanchette, Malcolm de Chazal, Robert Edward Hart…
Contemporains :
Pour La Réunion : Gilbert Aubry, Danyel Waro, Jean Albany, Alain Péters…
Pour Maurice : Khal Torabully, Michel Ducasse, Stefan Hart de Keating, Yusuf Kadel, Umar Timol, Jean Erenne, Edouard Maunick, Sedley Assonne…

Les Mascareignes n’échappèrent pas à cette représentation philosophico-littéraire du caractère édénique…

"Les Mascareignes n’échappèrent pas à cette représentation philosophico-littéraire du caractère édénique…"
Mascareignes, mes îles poèmes

PAUL ET VIRGINIE

La tortue, nonchalante, aux dunes maternelles
Posait ses œufs, confiante, et repartait vaguer.
Le dronte mou flânait, dadais, sous les tonnelles
Où pas un loup, jamais, ne l’y venait croquer.
Avant qu’un bernardin voulût nous romantiser,
Moi, marron malabar d’ataraxique allure,
Elle, gauloise franche d’air et de tenure,
Bannis, déboussolés, aimions y paresser.
Fière, elle débraillait en riant sa dentelle,
Vantait au vent son ventre, au sable caressant,
A l’anthère évasive, au rayon ravissant,
S’ébattait dans les bois, s’y dévergondait, telle
Arduina son aïeule, et puis, d’un grand élan,
Revenait à l’amant, qui, le corps l’appelant,
L’attendait à l’orée de quelque cascatelle.

J’avais de mon vieux boutre ôté, voleuse, l’aile,
Après que la mousson, d’un mouvement puissant,
M’eut déporté d’un coup des rives de Ceylan
Dans l’île où les vieux saints, les frustes parentèles
Maudissent les enfants quand, la chair et le sang
Et le parfum du poivre et du lys s’emmêlant,
Ils s’enfuient, délivrés de leurs tristes tutelles.
Heureux je nous ai vus, pécheurs, sur ce rivage
Où notre chant défiât l’astre se renfrognant,
Libres excommuniés des hameaux pharisians,
Menant là notre bal sans nul aréopage.

Pourquoi le roc est-il morne et lisse, et muet,
Où mon ciseau grava ce flétrissant menuet?
Ma ballade et la mer m’ancrent sur cette plage,
Et je ris mais ris jaune en froissant cette page
Où déteint le dessin de l’absconse aporie,
Sur un vaisseau sombrant, de Virginie qui prie.

DE PAUL À VIRGINIE

Fleur de lys en l’île de France,
Tu t’épanouis en mon banian.
Quand, furtive en ma sylve immense,
De liane en liane t’égayant,
Tu m’aguignes en t’effeuillant,
Sylphide à la pudeur fiète,
Je tente aux vents des quatre ouest
«A moi la cuisse à Virginie!»
Dans le jardin, diane, où tu danses,
Seul rougit mon grand flamboyant:
Balancant sa branche en cadence,
Il te constelle en brûlant.
Quand de ses rubis te parant,
Tu voltes nue, trouée bannie,
Je tente au soleil concurrent:
«A moi les seins de Virginie!»
Mordant aux fruits d’intemperance
Que tend un serpent omniscient,
Nous nous ébattons sans défense
Au fond d’un cirque luxuriant.
Quand tu t’exondes du torrent,
Pure et lascive épiphanie,
Je tente au satyre accourant:
«A moi les reins de Virginie!»
Récusant l’ordre calomnie
Qui te fis prude injustement,
Je tente à l’auteur du roman:
«A moi le sexe à Virginie!»

QUI M’A PRIS MA VIRGINIE?

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A BRIGIT, SOEUR DE VIRGINIE

Dès que déchevêtrée de ses voiles de brume
(Désolant souvenir que ce quatrain râleume),
Brigit, issue d’Albion, rousse et rose et riouse
En la baie de mes yeux mit son ancre précieuse.
Se mêlant aux multiples joyaux de mes îles
Chère, Elle se servit aux ors de mes idylles.
Ajoutant Ses rayons à mes eaux mascarines
Claire, Elle se fondu dans mes aigues-marines.
Il ne fallut pas plus qu’une vague un peu vive,
Un soupir de la mer, pour qu’aujourd’hui ne vive
Plus qu’au cœur de mes pleurs cette Sœur éphémère.
D’où vint ce deuil odieux qui défléuit la terre?

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Together with Rodrigues, Reunion and Mauritius form the Mascarene archipelago, in the Indian Ocean. Colonised as from the 17th century, these lands, which have been influenced by rich and diverse cultural trends, have produced talented poets of great renown.

This article surveys in a non-exhaustive manner, the main writers who have had a decisive role in the history of poetic creation in the Mascarene region, and identifies some of those who keep it alive at present.
A Degree of Paradise

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‘Linguistic vulnerability’ and the recognition of indigenous languages: The case of Kreol in Seychelles and Mauritius

By Dr Pascal Nadal (University of Seychelles) & Ronia Anacoura (International Creole Institute)

Mauritius and Seychelles have a lot in common with regard to languages. Besides the trilingual Kreol-English-French cohabitation in daily life and bearing in mind also the proximity and ‘intercomprehensibility’ between Mauritian Kreol and Seychellois Kreol, it can be argued that, linguistically speaking, these shared traits make of these two islands the closest ones in the Indian Ocean region, even if similarities also exist with the Kreol used in Reunion island (Bollée, 1993; Chaudenson, 2003a). Whilst it should be pointed out that, mostly for political reasons, Mauritius and Seychelles have attributed a varying importance to Kreol at different points in time, attempts to establish the importance of this indigenous language for purposes other than cultural promotion are still viewed with a mixture of derision, alarm and cynicism. Moreover, they are instantly construed as constituting a challenge to the sway of languages like English and French. In such a situation, how have these two countries tried to strike the right balance between the preservation of their indigenous languages, in this case Kreol, and the endorsement of foreign languages to ensure international relevance?

If in the Seychelles, Kreol enjoys the status of national language at par with English and French and that the Constitution promulgated in 1993, makes provision for the indiscriminate use of any of these languages, in Mauritius however, the situation differs significantly. Notwithstanding some recent developments with regard to the introduction of Kreol as an optional language in primary schools, the idiosyncrasy of the Mauritian situation resides in the absence of any specific mention of provisions governing language status in the country. The only references to languages in the Mauritian Constitution relate to provisions detailing the rights of individuals to make legal statements or to be read their rights in legal matters in a language that they understand. However, articles 33, 34 and 49, which relate to languages allowed in parliament, establish the relative superiority of English and French over other languages used in the island, as English and French are identified as the two sole languages allowed for parliamentary debate (article 49) and membership to parliament is subject to the capacity by the prospective MP to read and understand documents written in English.

Until today, therefore, the constitutional provision concerning languages that will be accepted in parliament and is taken by many as being an article that ‘by default’ establishes the official status of English and French (Tirvassen, 2009). In Seychelles, however, Kreol is the language that is exclusively used in parliament, be it for the presentation or the debating of motions, and moments like oath-taking by MPs are the rare ones where English is used. But even the oath – which features in the Constitution of Seychelles – might be taken in Kreol in the near future, as the Constitution has already been translated in Kreol and is currently awaiting its officialisation.

Historically speaking, the political will to unite the country around the creole identity has led to an unprecedented valorisation of this indigenous language in Seychelles through successive waves, which may
broadly be chronicled around the following five landmark developments:

• 1976: Independence of Seychelles/First Republic: Article 82 of the Constitution designates English as official language for use in parliament, but the use of French is allowed to a certain extent for official purposes, thus leading to a form of balanced bilingualism (Canova, 2006).

• 1979: Following the Liberation, the status and hierarchy of the three languages used in the country undergoes a change that witnesses the officialisation of trilingualism: English-French-Kreol.

• 1981: Modification of the status of languages, with Kreol becoming the first national language, before English, while French is relegated to the third place and ceases to be medium of instruction.

• 1982: Kreol becomes a medium of instruction at pre-primary level and in the early stages of primary schooling.

• 1993: The first paragraph of article 4 of the Constitution promulgated under the Third Republic stipulates that the three national languages of Seychelles will be English, Kreol and French.

Consequently, the use of Kreol is less associated with some form of social inferiority, as is often the case in Mauritius, where very strong patterns of prestige and prejudice are associated with language (Bartens, 2001; Rajah-Carrim, 2007; Sauzier-Uchida, 2009; Sonck, 2005) and also with the Afro-Mauritian community, which regroups those that are commonly referred to as the ‘Creoles’ (henceforth used to refer to the ethnic label) on the island (Boswell, 2005; Eriksen, 1999). Over and above the long political bearing that the issue has had in Seychelles, the homogeneous population profile can in part be held as accountable for the wider consensus noted around the recognition deserved by the islanders’ maternal language. In Mauritius, comparatively, languages remain a very sensitive issue, due in great part to the island’s diversified ethnic profile, and consequently, politicians and language policy makers always tread cautiously on this ground. For instance, the question of whether Asian languages should be taken on board while establishing the ranking of candidates for the exams marking the end of the primary schooling cycle is one that has given rise to prolonged legal conflicts between ethnic/religious groups, before an agreement could be found on the matter.

But despite the relatively greater acceptance enjoyed by Kreol Seselwa in the archipelago, there is still a lot to demystify with regard to the perception that the institutionalisation of the language had been a smooth process. For instance, fears were expressed on the difficulty of learning a language derived from existing languages, but that at the same time had its own specificities, as pointed out by Chang-Him (1975). Opinions were also expressed via letters published in the press about the uselessness of Kreol in a context where the learning of foreign languages was deemed more useful, given the heavy reliance on tourism (Collet, 1977). Kreol was even disparagingly ruled out as being a linguistic phenomenon that did not deserve the name of ‘language’ and that was only fitting for use in swearing! Pressure also came from MPs, who campaigned in favour of the return of English “back to its pedestal” (“Back to its pedestal?”, 1994, p.3), and from the official press organ of the Catholic church, which conveyed the views of its readers that the adoption of Kreol at school was tantamount to a backward move (“Ça zaffaire “kreol “”, 1981, p.6). Moreover, the report of the Language Policy Review Committee set up by the Seychelles Ministry of Education and Culture in 1994 and that eventually brought about, as one of its recommendations, a reduction in the number of years during which Kreol was to be used as a medium of instruction at primary level underscored a “resistance to Kreol” (p. 9) on the part of teachers for a myriad of reasons. Some of these prejudiced insights into the relevance of Kreol very remain deep-seated until today, as observed by Hoareau (2010) when she refers to the opponents of the language, for whom English is the only true language to deserve its place in education.

If in the Seychelles, the ‘recognition’ of Kreol as a language was both a consequence and an agent that enabled the fulfilment of the wish to unite the country behind a new (anti-colonial and pro-masses) identity, in Mauritius, however, the recognition is just a partial one, with politically-inspired moves like the introduction of Kreol as an optional subject in primary schools and the creation of a Creole Speaking Union (CSU). The CSU, which aims at the valorization of Mauritian Kreol via different artistic, cultural and academic endeavours, was actually created in 2011, years after organisms like the English Speaking Union or the President’s Fund for Creative Writing in English had been set up. A very telling indication of the political manoeuvre behind the setting up of such bodies is the fact that the Kreol Speaking Union was created simultaneously with the Bhojpuri Speaking Union, the Chinese Speaking Union, and the Arabic Speaking Union, in a careful move to provide each constituent of the Mauritian population with ‘its’ Speaking Union!

The political intention behind the introduction of Kreol as an optional language at primary level is also manifest in the fact that, even though local organisations like Ledikasyon Pu Travayer and the Federation of Pre-School Playgroups had been campaigning for decades in favour of the proper valorisation of indigenous languages used in Mauritius, it was mostly an electoral lobby by one political/sociocultural movement militating in favour of Creole people in Mauritius that prompted the two major political alliances competing for the 2010 General Elections

Over and above the long political bearing that the issue has had in Seychelles, the homogeneous population profile can in part be held as accountable for the wider consensus noted around the recognition deserved by the islanders’ maternal language.
Culture

to include in their electoral manifesto the introduction of Kreol either as subject or as medium of instruction in case of victory (A. Ah-Vee, personal communication, December 9, 2011). Thus, since its inception, the project was seen by many as an initiative destined to please one specific ethnic group, even if Kreol is the mother tongue of an overwhelming majority of Mauritians.

Whilst it also had a lot to do with politics, the post-independence history of Seychellois Kreol, however, is substantially different from what happened in Mauritius, in the sense that as from 1977 the Kreol identity (in all its cultural, philosophical and ideological dimensions) was recognised as a major asset that could be used to reduce the colonial imprint alongside a socialist-inspired move that sought to address a past history of inequality between a wealthy minority and a deprived majority. It was also envisioned as a strong agent in the quest of a national identity (de Landshere, 1979) and as a language that was capable of liberating the people from the prejudices that they nurtured towards their own mother tongue (D’Offay de Rieux, 1979).

It is, thus, not surprising to note that the three different versions of the national anthem used in Seychelles are all in Kreol, compared to Mauritius, where attempts to produce a Kreol version of the ‘Motherland’ in 1983 were met with derision (Valaydon, 2014). Interestingly, while these ground-breaking developments with regard to the official language policy, especially in education, were underway in Seychelles, reviews and reports of enquiry commissions on the educational system in Mauritius were either proposing the maintaining of the linguistic status quo or were resolutely opposed to any move destined to formalise the use of Kreol in the classroom (see Mahadeo-Doorgakant, 2012, for a discussion of various policy documents relating to the language issue in the Mauritian educational system).

Overall, the concept of ‘créolité’ as a celebration of cultural fusion (Ormerod, 1998) is much more significant on Seychellois soil than in Mauritius, where it solely emerges sometime around the month of October, during the celebration of the Kreol Festival.

In this case as well, the political dimension of such an enterprise – often considered as a favour to the Creole community and not really as a moment of celebration of créolité/ hybridity (such as defined by Knepper, 2006) for the whole island – does not go unnoticed, with political leaders trying to draw an electoral capital from such events.

Also, beyond the endeavours mentioned above and excluding personal enterprises by individuals and private bodies and organisations, e.g. for the establishing, explanation and dissemination of orthographies; production of Kreol dictionaries; translation of religious works and official documents like the Constitution; organisation of competitions in and about Kreol; preservation of local folklore through Kreol songs/children’s games, etc.; translation of Internet search engines in Kreol; and the publication of literary works in Kreol, a dearth of official undertakings aiming at further valorising Mauritian Kreol will be observed as long as the status of the language is not elevated via its use in writing in institutions like the parliament and the judiciary. Recently, in a highly mediatised murder case, one of the convicts found its request to have the documentary evidence to be used during trial translated in Kreol – a language that he understands, as per various constitutional references governing the use of language in legal matters – turned down by the presiding judge, on account that he (the convict) was assisted by a lawyer and that, should he find himself confused by the use of English during the proceedings, his lawyer could still assist him by providing explanations and clarifications in Kreol (Ruhornataly, 2014).

In 2007 in Seychelles this time, a court of appeal case highlighted how linguistic technicalities and constitutional provisions could lead to unprecedented interpretations of the law. Indeed, the defending party, which had been found guilty of defamation for having called the plaintiff “voler pikep” [meaning “the one who stole (a) pickup(s)!”], argued that the expression “voler pickup” was inadmissible for consideration in court proceedings. This argument was substantiated by referring to the second clause of article 4 of the Seychelles Constitution, which states that “Notwithstanding clause (1) [The national languages of Seychelles shall be Creole, English and French], a person may use any of the national languages for any purpose but a law may provide for the use of any one or more of the national languages for any specific purpose.” It was the interpretation of the defendant’s counsel that, since English is the language of business for the court, the incriminated expression (which had not been translated in English, the official language of the court) had been formulated in a foreign language and that the case should accordingly be dismissed.

This case, which attracted a lot of public attention, helped to underscore the extent to which the judiciary in Seychelles remains heavily influenced by English. In like manner to the situation of Mauritius, spoken Kreol is widely used by plaintiffs, defendants and witnesses during court hearings, but records of proceedings are instantly transcribed and translated in English by interpreters. Moreover, court rulings are written and delivered in English. As an illustration of the administrative complications emanating from the use of a language other than the mother tongue in the law courts of Seychelles, Chopy (2002) argues that close to 80% of people who appear in court for legal proceedings require the help of a judicial interpreter.

Whilst we need to point that individual initiatives regarding the use of Seselwa Kreol – especially in the cultural and literary field – are considerably facilitated by the existence of a body like the International Creole Institute, some form of stagnation with regard to the institutional usage of the language can nonetheless be noted. For instance, Kreol is not studied beyond the primary level and finds its use restricted to the teaching and learning of non-academic subjects like Citizenship Education at secondary level. Such a situation has more profound repercussions that we may imagine, as pre-service primary teachers who undergo training in view of teaching Kreol at primary level have a very limited knowledge of written Kreol Seselwa by the time that they attend their teacher education
course, as they have been completely cut off from the language during the five years of their secondary schooling and find it difficult to cope with the level of learning that is expected of them in that language at post-secondary level (Gedeon, 2004).

Stagnation is also apparent in the written media, where the local language can be said to have but a symbolical presence, being often restricted to reporting about events of lower news value, in articles that are relegated to the interior pages. One exception is the main daily newspaper of the island, published by the National Information Services Agency, which devotes—once a week—a special page to Kreol in the ‘language games and quiz’ corner and which even provides tips about how to write grammatically correct Kreol Seselwa. Purvis (2011) and Henderson (2011) also note that some weekly newspapers and periodicals do try to maintain some sort of ‘balance’ between articles written in the three languages, but these publications do not have as wide a readership as the daily newspapers, as they essentially function as the press organs of political or religious organisations. According to Bollée (1993), the decline of Seychellois Kreol in the local press has been sustained since 1977-1978. Some newspapers use English throughout, while others restrict its use to reporting about anecdotal news items like police communiqués in connection with court cases, the habitual practice for front page and other important news pieces making headlines being the use of English.

The situation is far from being different in Mauritian newspapers, where French is the dominant language, except of course for English-medium newspapers. Whilst it is true that journalists rarely refrain from including expressions or excerpts of statements made in Kreol in the articles that are written in French (and sometimes these expressions or statements even appear in the titles of these articles), yet, no articles that are exclusively written in Kreol may be found in any of the well-established newspapers of the island. One exception to this was the newspaper Le Mauricien, which—for two years in a row—devoted one full page per week to a pool of independent Kreol language enthusiasts for the writing of articles in Mauritian Kreol on subjects as diverse as language, literature, education, history, and philosophy, to name but these.

Moreover, in cases where excerpts of statements made in Kreol are included verbatim, the orthography used is very approximate, with journalists often writing Kreol in the way that they write French, using accented characters and other writing conventions that do not exist in Kreol Morisien. The often-made (and rather simplistic) claim is that if the proper orthography is used, readers will find it difficult to grasp the meaning of what is being conveyed, but we can safely bet that this situation actually stems from a lack of knowledge of the official orthography for Mauritian Kreol or from an unwillingness to learn it. This differs from the situation in Seychelles, where the Kreol orthography used in newspapers is the standard one, or at least comes very close to it. This is particularly noteworthy, considering that one difficulty of written Seychellois Kreol, as pointed out by Chaudenson (2003b), resides in the numerous waves of changes brought about in the orthography of the language, Kreol Seselwa and Haitian Kreol being the first creole languages to have been written according to an official orthography.

Moreover, the audio-visual landscape of the Seychelles projects a very comforting image of the valorisation of Kreol Seselwa, with the language being used without any complex whatsoever in almost every locally-produced TV programme, be it a cultural item, talk show or news item.

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Moreover, the audio-visual landscape of the Seychelles projects a very comforting image of the valorisation of Kreol Seselwa, with the language being used without any complex whatsoever in almost every locally-produced TV programme, be it a cultural item, talk show or news item. Moreover, the Kreol news bulletin is the most important of the three that are broadcast, with the English and French bulletins being condensed versions of the Kreol bulletin and being aired at times when the viewership rate is a reduced one. This situation differs completely from the one that prevails in Mauritius, where the main news bulletin is the French one, whereas the one in Kreol is a shorter version of the French and English news bulletins. Prior to the airing of a proper Kreol news bulletin and for a number of years, a short summary of the main news was offered in Kreol at the end of French news bulletin, as yet another illustration of the inferior status associated with the language with regard to the presentation of news on TV.

Insofar as individual endeavours in favour of the promotion of Kreol are concerned and irrespective of whether or not the State’s formal engagement in support of these endeavours was secured, we nonetheless note that much has been done, as testified by the number of orthographies that were being concurrently used (Hazaël-Massieux, 2002) before the establishment of the Grafi Lamoni (Hookoomsing, 2004), a harmonized orthography for the writing of Mauritian Kreol. Different stakeholders—individual writers, like Dev Virahsavmy; researchers like Philip Baker and Vinesh Hookoomsing; organisations like the Catholic Church; and militant/political groups like LPT and Lalit—were indeed writing Mauritian Kreol according to different orthographies, prior to 2004. Besides developments in the linguistic field, things had been moving rather rapidly on a number of other fronts in Mauritius: culture, literacy and the academia being some of these areas. In the latter case, for instance, we need to put on record that as from this year, the University of Mauritius is offering a new degree course that combines French Studies and Creole Studies, a real feat for those behind it, considering that Mauritius only took the decision to start teaching Kreol to some of its children (given that the subject is not a compulsory one) at primary level, just three years back! Moreover, the Catholic Church, via its educational bureau, has played a pioneering role in the establishment of a Kreol-based curriculum for learners of the pre-vocational sector at secondary level. As from the 1990s, the ever increasing proportion of Creole priests in the local clergy also made radical moves in favour of a greater prominence to be given to Mauritian Kreol language in the celebration of worship service.

Even though we reckon that the
issue surrounding the use of the mother tongue as a medium of instruction [viz. Mahadeo (2006) on the nationalist v/s the functionalist response to language choice in education, or Mahadeo-Doorgakant (2012) on the nationalist v/s nationistic approach to language choice and instruction medium in the Mauritian context] deserves a reflection on the nationalist v/s nationistic approach to education, or Mahadeo-Doorgakant (2012) on the nationalist v/s the functionalist response to language choice in Mauritius. For instance, if we sit for the 'O' level examinations, we come to the realisation that only 2% of students (year 5 of secondary schooling), we come to the realisation that only 2% of students sit for the 'O' level examinations, which marks the end of the primary schooling cycle. Over the last eight years, for instance, the mean score (calculated over 100) for this language – which is the medium of instruction for the last four years of primary schooling – has never risen above 48, just reaching 40 for the last two years. A look at the grade distribution for the subject does not reveal anything brighter as well, with only 15% of students managing to obtain grades situated between A and C (compared to 45% for French and 60% for Kreol) for the 2013 National Exams. Even though figures can be interpreted in any way whatsoever to tell the tale that we want them to tell, the fact of the matter remains that the situation is as problematic in Mauritius. For instance, if we consider the performance at Form V level (year 5 of secondary schooling), we come to the realisation that only 2% of students who sit for the ‘O’ level international exams offered by the University of Cambridge manage to obtain a distinction in English... Moreover, statistics from the Mauritius Examinations Syndicate indicate that, after having studied English as a subject and all other subjects in English for eleven years (six at primary and five at secondary), around 50% of candidates for these same exams do not manage to obtain a credit (up to grade 'C') in English... And yet, they are expected to understand and use that same language when answering complex questions that require higher order thinking and a highly technical jargon in specialist subjects like economics or biology...

It would here be apposite to note that one of the rare provisions governing language use in the Mauritian educational system dates back to the often quoted Education Ordinance of 1957, which stipulates, among other things, that as from the fourth year of primary schooling, English shall be the sole medium of instruction and of classroom interaction between teacher and pupil. This has been maintained over the years even if it is common knowledge in the country. This provision is hardly observed by a vast majority of teachers and that teachers actually hold to Kreol and French as support languages while explaining subjects like Mathematics, Science, or History & Geography (Bissoonauth & Offord, 2001; Foley, 1995; Rajah-Carrim, 2007). Sometimes, the explanatory part during the whole lesson is conducted exclusively in Kreol and/or French, and the use of English is restricted to the provision of written notes which the pupils take down in their copybooks. In Seychelles as well, the Education made provision for the use of English as medium of instruction, in a deliberate colonial move to strengthen the position of English language (vis-à-vis French) on the island. However, successive waves of reform regarding national language policy and the use of languages in education have witnessed a constant recasting of provisions governing the use of Seychellois Kreol in schools.

When placed against the broader picture provided by the linguistic situation of other creoleophone countries, it is undeniable that much has been achieved for the valorisation of Kreol in Mauritius and Seychelles. It is also clear that in the latter case, and despite some initial manifestations of opposition to the project, the political will behind the use of the island’s vernacular language as an agent of national unity has enabled Seychellois Kreol to evolve in a well-organised manner (under the aegis of clearly designated and properly funded government agencies and bodies) and access spheres that are still undreamt of in Mauritius, like the parliament or the school — in a capacity as medium of instruction and not only for children facing learning difficulties. Nonetheless, it seems that 35 years after the momentous decision of reviewing language status in the island and upgrading the position of Kreol Seselwa vis-à-vis international languages used on the island, we are presently at crossroads and stakeholders involved with the issue of languages in Seychelles seem to be ever asking ‘what else/what next concerning Kreol?’ In Mauritius, on the other hand, some form dynamism with regard to Mauritian Kreol has recently been noted. This very presumably stems from developments that saw a long-awaited and much-debated introduction of the language as an option at primary level. Also, and paradoxically, the rather late involvement of the State in favour of the promotion of Mauritian Kreol has led to the emergence of multiple personal initiatives with regard to the use of the language by individual stakeholders or organisations, either out of their own convictions with regard to the benefits of the language in education or out of a desire to partake in the safeguarding of the island’s linguistic asset. This has, for instance, led to the production of the Dikshioner Morisien (2009), first monolingual creole dictionary in the world, and other significant breakthroughs at tertiary level.

Nonetheless, it is important to point out that half-hearted official initiatives and policies, or those undertaken for vested political interest, are constantly sending the wrong message to the people of Mauritius. Instead of being viewed as moves in favour of the valorisation of a language that belongs to all the people of Mauritius, initiatives destined to expand the scope of Kreol use in the country are rather being regarded as nods in the direction of the creole community specifically. As long as this misperception will survive, any attempt at valorising Mauritian Kreol will be several lengths behind what the situation could have been in optimum conditions.
Résumé


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Seychelles Independent, p. 3.


Environment

Landscaping: Initiatives and sustainability in SIDS


Introduction and context

Small island developing states (SIDS), face particular challenges due to their small size, their isolation and their exposure to external natural and economic influences. SIDS, rich in the number of unique plants and animal species, have fragile environments. Their biodiversity is increasingly threatened by exploitation of both their marine and terrestrial resources. The unsustainable exploitation of biodiversity results in a degraded environment, reduced natural resources such as soil for cultivation or reef structures for fish, and increasing stress on environmental systems that sustain the human population. The confined space of small islands, their isolation and vulnerability to natural and economic events, ordains that development should be closely integrated with environmental considerations.

The geographical distance of many SIDS from large markets puts limits on the options for development. Resident populations are a considerable resource for development, however SIDS experience high levels of migration of their resident population, particularly of skilled human resources which in turn increases demand on training support. Production industries and service industries which require the availability of technically able, but not highly specialized expertise could contribute to reducing economic vulnerability.

Globally, landscaping is a developing industry, with increasing industry standards and recognized techniques which contribute to sustainable development. Generally, the term ‘landscaping’ refers to any controlled, human induced, constructive change to natural elements such as landform, elevations and water courses. Changes to the plants and wildlife occurring on site, and thus to the sites overall biodiversity value, are also included in the term. The main goals of sustainable landscape design are to conserve water and energy, reduce waste and decrease water runoff. In this framework, landscape projects that build on such goals will consider problems that affect directly many SIDS such as erosion control, the husbanding and maintenance of soil resources, reduction of waste through composting, preservation of existing biodiversity as well as conservation of material resources.

In the context of SIDS, landscape choices can have a disproportionate impact, while also offering opportunities for positive gain if choices are well made. Good landscape choices can reduce the impact of development on wildlife, as well as support native species permeating into managed or degraded areas. Through the choice of species in planting plans, and the presentation of historical features, good landscaping can contribute to cultural pride and heritage. Sustainable landscaping by nature, will design for the maintenance of ecosystem services such as rain water retention and air quality. The production of plants to supply these projects could provide training and employment opportunities for people. Landscaped public gardens can support social resilience to change by increasing community cohesion and cooperation as well as providing opportunities for the diversification of livelihoods. This article will focus on how landscape initiatives and practices can contribute to sustainability and reduce economic vulnerability.

Valuable zones

Through the application of sustainable landscape design principles to land-use and landscape development, investors and residents can reduce the development impact on the environment, raise real estate values, promote tourism, and maintain biodiversity. Small island developing states have limited land area and relatively extensive shorelines, both of which are intrinsically valuable zones which face especially challenging conditions, from erosion, recurrent severe weather events, to the human pressures of tourism development and population clustering at waterfront locations. Sustainable landscape designs tackle these challenges, through planning for development and integrating recreational and residential uses while maintaining sensitive and coastal vegetation, such as mangroves, wetland areas and flood plains.

Specifically, increasing tree cover provides shade from harmful ultraviolet radiation, particularly in playgrounds, schoolyards, along roads and in picnic areas. The presence of trees and vegetation...
increase property values, as general observation shows that home values are higher on tree-lined streets. Lastly, community gardens and neighborhood parks can help reduce physiological stress, aesthetically improve an area, and contribute to human wellbeing.

**Landscape planning**

Landscape changes as well as land use changes are generally governed by national, regional or local planning laws, which aim to moderate the impact of the changes on residents as well as the biodiversity occurring on the site. Increasingly, projects employ industry standards in the development phase of their project plan, which can help to fast-track the planning process. A prominent example of this adhesion to standards prior to planning application is in the golf industry, through the GEO Legacy™, which assists new application is in the golf industry, through this adhesion to standards prior to planning process. A prominent example of project plan, which can help to fast-track the planning process. A prominent example of this adhesion to standards prior to planning application is in the golf industry, through the GEO Legacy™, which assists new golf course or golf course renovation projects to develop a sustainability blueprint for the project.

Planning laws rarely control the landscape details of the site. However, various accreditation systems such as SITES™, exist to encourage and reward landscape development projects for sustainability in the design and implementation process, including the choice of surface management and species. SITES™ recognizes that landscape projects need to consider wider fields than those traditionally considered in the planning process or in landscape project design, including Resiliency, Ecosystem Services and Human Health, alongside the more conventional Soils, Materials, and Water components of a more traditional project brief.

The establishment of landscape accreditation and award schemes as well as to encourage good practice is a reflection that landscape has a vital role to play in sustainable and economic development. Industry credits are given for widely different considerations, including pre-design aspects such as engaging local stakeholders, and undertaking baseline studies. The engagement of stakeholders in project planning and throughout the life of the project can reduce vandalism, rubbish dumping or fly-tipping as well as ensuring that local communities benefit from training opportunities and off-shoot projects such as the sale of equipment. Projects which integrate or conserve habitats for threatened and endangered species, or that focuses development on the redevelopment of degraded sites, may also gain credits.

**Erosion and soil conservation**

Once a permit for landscape change has been awarded, the detailed landscape design and on-site layout can make serious contributions to the sustainability and environmental impact of the landscape. Healthy soils and existing vegetation should be conserved, fenced and protected from damage during construction, reducing the need for and impact of replacement. Techniques such as rapid vegetalisation of slopes to reduce erosion will prevent soil loss and the flow of debris into drains and into coastal habitats. Design for sustainability encourages the development of structures which capture and slow water movement over the ground such as bioswales and dunes. Also encouraged are surfaces which enable water to infiltrate and be retained on site such as permeable road surfaces, parking and pavements as well as green roofs, all of which reduce the need for watering of the plants on site.

**Support for biodiversity**

Landscape details such as the planting of vegetation matrices, and the details of planting design can offer substantial support to on-site biodiversity. For example, increasingly, expanses of turf grass are considered to be unsustainable and environmentally expensive, due to their need for regular watering and applications of fertilizer as well as pesticide and herbicide treatments. GEO Certified™ golf courses must identify and plant the grass species which requires the least use of irrigation water, fertilizer, pesticides and other resources. Such courses must also make efforts to reduce their total area of managed turf grass. These considerations once taught and established on a high-value golf course, will spread into the community and become more common practice in municipal as well as residential gardens.

The value of managed habitats for insect and small vertebrate biodiversity can be increased through the use of ground cover plants (not grass), and by planting mixed, taller species. Creating planted corridors between isolated patches of vegetation encourages the movement of birds and other animals. A focus on planting food plants for birds and animals can increase the impact of native plantings, as these animals become vectors for seed distribution. Developing vertically rich planted patches can further increase habitat availability for wildlife.

In coastal regions landscape details are equally important, for example, the exact positioning of landscape features such as coastal paths can have a major positive impact on the ability of turtles (in particular the critically endangered Hawksbill turtle) to nest successfully. Paths or structural infrastructure which hinder access to beach front vegetation significantly reduce or displaces Hawksbill turtle nesting frequency.
**Environment**

**Temperature, air quality and noise**

In urban settings, landscape features which minimize environmental impact include the careful positioning of vegetation blocks to minimize building energy use, such as by allowing light to enter a building so reducing the energy consumed in lighting. Tree-lined walls may be 5° to 20°C cooler than the peak surface temperatures of unshaded surfaces. These cooler walls decrease the quantity of heat transmitted to buildings, thus lowering air conditioning cooling costs.

Trees also remove pollution by collecting airborne particles on their leaves and twigs. Some particles can be absorbed into the tree, though most particles that are intercepted are retained on the plant surface. The intercepted particle often washed off by rain, or dropped to the ground with leaf and twig fall. Consequently, vegetation is only a temporary retention site for many atmospheric particles. In 1994, trees in New York City removed an estimated 1,821 metric tons of air pollution at an estimated value to society of $9.5 million. Air quality improves with increased percent tree cover.

Raising land dunes in a roadside development can reduce the impact of noise, and encourage people to use and enjoy a recreation site or a noise-shielded pathway, and to walk their journey rather than use transport.

**Materials and sourcing**

The natural environment can be seriously damaged by uncontrolled exploitation of materials such as sand, gravel, soil for land-fill or rocks for construction or landscape projects. Many states legislate against unauthorized extraction, as they do against unauthorized landfill and construction. Landscape projects that plan to limit and control material resources through careful assessment of supply chains should be able to avoid negative impact.

Local is usually best when sourcing landscape materials. Using local stone for example, ensures that the landscape blends into the wider environment, locally made bricks or building material brings an immediate sense of harmony with the location. Distinctiveness can be achieved through landscape design and choice and use of plants.

Coastal projects that integrate sea washed drift-wood tree trunks or inland projects that use large boulders in the design, make reference to their environment through the use of these highly prized features. Prior to commencing a landscape project, a site audit will highlight any existing materials such as paving, or wood and stone items or structures, that could be salvaged and reused in a new project.

**Sustainable soil management**

The most fundamental landscape material is soil; many SIDS are volcanic islands, possessing basalt soils, usually rich in minerals, and once able to support lush plant growth. Soil loss through erosion and soil fertility lost through management choices and environmental vulnerability result in decreasing soil resources for food production and for biodiversity support. Soil biota, including arbuscular mycorrhizal fungi (ABF), provide a number of key ecological services to natural and agricultural ecosystems. These fungi, which form win-win (symbiotic) relationships with over 80% of plant species, grow in close association with plant roots, increase the growth rate, health and success of the plant. More specifically, these fungi increase the ability of the plants to uptake minerals, they influence water requirements, increase growth and through increased health, help plants cope with stress and resist pests and infections. ABF are most frequent in plants growing on mineral (sandy) soils, and are of extreme importance for plants growing in nutrient poor soils, such as in sand dune environments, or on damaged or eroded soil. Depleted soils, infertile, sandy or mineral rich soils or soils, low in organic content, or with a salt content visible in surface crusting, content can be improved by washing with fresh water to remove excess salt, balancing acidity by the addition of lime, and by the addition of compost and manure to increase organic content and water and nutrient holding capacity. Research indicates that following determined procedures, ABF inoculums can also be added to the soil in order to improve the establishment and sustainable cultivation of agricultural and landscape plants.

Where possible, top soil should be collected from construction sites prior to construction for use in subsequent rehabilitation and landscaping (although some research shows that the physical or mechanized handling of soil results in some biological, chemical and physical changes, with a loss of potential for ABF infection and earthworm populations). Some evidence suggests that once spread and planted these adverse effects disappear.

Where landscape sites are lacking a viable soil, the non-soil alternative substrate that retains water and mineral salts, and that may be readily available in tropical locations, is decaying coconut husks. The availability of this material may be more limited as a commercial market in the horticulture industry has developed for this product as an addition to potting media. Spread across a leveled surface to a depth of approximately 8 cm, and rapidly planted, this preparation results in an acceptable growing medium. Regular additions of lime to offset the slight acidity of the coconut coir, and minerals in the form of slow-release fertilizers combined with organic manure for slow-release nitrogen, result in an acceptable medium.
**Water resources**

Development on SIDS is inherently limited by relatively small watersheds and threatened supplies of fresh water. Water affects sustainable development either when in too great a quantity – through flooding, water induced erosion, seasonal, storm water flows, or when water is a limiting resource and its efficient use becomes a vital feature sustainable management. Management authorities are increasingly encouraging an orientation towards water retention, water harvesting and water efficiency.

Water sensitive landscapes start at the planning and construction stages, through planning for onsite harvesting of any water falling on hard surfaces, into constructed or plastic cisterns or systems which exploit the water retention ability of sand and form part of the landscape. Onsite retention of water is a feature of sustainable landscapes – soil can hold a considerable amount of water, slowly releasing it for plant growth.

Structures such as sand dams which retain sand behind a barrier, and sand cisterns which can be located under parking sites, terraces and patios, can hold 25% - 40% of their volume as water. The basic principle of such dams is that water is stored sub-surface instead of at the surface. Evaporation losses are thus greatly reduced. The sub-surface reservoirs are recharged by rainfall, and flowing water in the case of sand dams.

Efficient water use in landscape or “waters-smart” landscapes are an accepted standard. Water use can be reduced by many factors, including by maintaining healthy soils, which like the sand dams, have the ability to retain water onsite, as well as by land-use choices and plant choice. For example, turf areas are water demanding, whereas, communities of native species tend to be less water demanding. All planted areas should be finished with surface mulch, which shields the soil surface from diurnal temperature variation, as well as from water loss through evaporation.

The installation of automated irrigation systems can contribute to reducing water use, through enabling watering to be carried out at night, when the loss of water to evaporation is reduced; a rain sensor should always be installed. Grouping plants with similar water needs is a design technique that facilitates economic watering. Although labor is often available in SIDS, the use of slow and local water distribution methods such as soaker hoses (leaky hoses laid on the ground), is advisable to reduce water use; non-return valves should always be in place to secure water sauces from returning dirty water.

**Plant and species choice**

As the pressure for land increases, particularly on small islands, the need to protect remaining forests and species rich coastal and marine areas is recognized by authorities. Treaties are signed, and laws enacted that reduce people’s access and their rights to exploitation. The reduced biodiversity richness occurring on land outside protected areas results in isolated, protected patches of wildlife, separated by extensive areas which are otherwise devoid of many of the naturally occurring plants and animals. Landscape projects that create wildlife-sensitive environments through the planting of native species, providing food and habitat plants for native birds and insects can support wildlife moving across the landscape from the rich core areas.

The use of native species is otherwise recommended and promoted for sustainability, based on considerations of plant adaptability to the site, reducing water and fertilizer needs, and the likelihood of reduced pest susceptibility. The Yellow cane palm, *Dypsis lutescens*, endemic to Madagascar, has become economically important in Europe, grown as a decorative house plant. In Madagascar, this species is widely used in landscape projects, and nursery cultivation is now replacing wild collection. In areas where the native plants are not widely grown or perceived locally as particularly decorative, sourcing native species without collecting from the wild can be a difficult goal for a landscape project.

**Business opportunities**

Landscape projects on SIDS, are often limited by the availability and diversity of plants. Given enough lead-time the establishment of an on-site nursery is a good option. Plants can be acclimatized, their adaption to site conditions assessed and good performing species or varieties bulked up. Landscape projects can equally have a positive impact on the establishment of nurseries by local residents. In Madagascar, two large landscape companies outsource plant production to peri-urban nurseries in order to reduce costs. Such partnerships, with confirmed markets can create opportunities for income generation by residents. Of particular value is a project which provides some training in plant production to rural communities and a confirmed market for sustainably produced native species.
from patches of relict vegetation. Such partnership and investment with rural communities is necessary in bringing native plant species into cultivation, rather than landscape projects importing pan-global species.

**Introduced and invasive species**

Pests, weeds and diseases know no boundary, and are unfortunately often introduced by landscapers bringing decorative species from one project to another. Introduced species can have a damaging impact on native biodiversity by out-competing and displacing native plants, and disrupting links with native insects, birds and grazing animals. A pertinent example is the spiny shrub, native to north eastern Argentina, known as the Tropical soda apple (*Solanum viarum*). This aggressive species is becoming increasingly wide spread throughout the tropics, it is toxic to humans, unpalatable to livestock, and is a host for many plant diseases and pests of cultivated crops. Able to reproduce from seed, spread by birds and animals, as well as from root material, this species is now a ‘notifiable weed’ in many States.

Conversely, native species can become invasive if changing land use removes the factors that would naturally limit their growth, such as predators or competing flora. In Madagascar, the native Traveler’s Palm, *Ravenala madagascariensis*, has become the dominant species in degraded lowland vegetation. Seed germination is stimulated by light, and so with the loss of forest cover, seed germination is greatly facilitated. Thick stands of *Ravenala* limit the successful establishment of other species – native or introduced.

**Incorporating food production in landscape initiatives**

In Beijing, persimmon and walnut trees are grown in parks, and in Singapore the Housing Authority has a policy of growing fruit trees in housing areas for the benefit of elderly people. Certain salad crops and vegetables can be grown in vertical plantings on the walls of buildings, using modern soilless, water-based cultivation systems. Roof gardens and decorative residential vegetable gardens increasingly contribute to food production in the cities of developed countries. The SITES v2™ system of accreditation rewards the production of food from on-site plantings, through the incorporation of plants with edible shoots, leaves and flowers, as well as fruit.

In developing states, urban agricultural production contributes to food security and constitutes a large proportion of the total food supply in developing cities, where it increases the availability of nutritional food to the urban poor. Issues of toxicity due to pollution, as well as ownership of land and resources reduce the yields and so reduce the contribution made by urban production. Trees producing small edible fruits such as *Terminalia catappa*, The Indian almond, or *Zizyphus mauritiana* the Indian Jujuba often provide foods that are appreciated by children and the poor. Planted in landscape projects, such trees contribute to food production without creating issues over harvest collection or ownership.

However, the collection of leaves and other plant parts for food as well as fuel can lead to the complete degradation of planted landscapes as increasing stress is placed on growing populations of urban poor.

**Landscaping for wildlife**

Contending for space, wildlife conservation programs may promote protection of remaining forests or species rich coastal and marine areas, reducing people’s access and opportunities to exploit resources. Development of protected areas, coupled with substantial changes to land use outside these protected areas, results in isolated patches of wildlife separated by areas which are otherwise inhospitable to many of the naturally occurring species. Integrating wildlife-corridors at the planning phase can enable the wildlife to travel across the landscape from the rich core areas, increasing resilience to climate change and invasive species.

Loss of habitats to wildlife due to population growth and degradation is compounded on SIDS by the impact of climate change, and sea level rise. Coastal creeks or flood plains can be protected through landscaping solutions such as by planting the grass, vetiver (*Vetiveria zizanioides* L. Nash) in dense ‘hedges’, or by encouraging the growth of mangrove shrubs tolerant to sea or brackish water, or equally through the use of built or constructed solutions as appropriate. The maintenance and protection of coastal habitats can bring multiple benefits to communities as well as to biodiversity.

**Landscaping initiatives and sustainability in SIDS**

Landscaping activities are often perceived as concerns for rich, developed and stable states. However landscape underpins the economy, offering a natural and cultural environment that support resilience in human residents as well as in biodiversity, sustains agriculture, attracts inward investment and supports the tourism industry. The adherence to landscape accreditation and award schemes promotes good practice and ensures that landscape projects fulfill their role in sustainable and economic development.

The confined and isolated conditions of small islands, orlands that any development should be designed to reduce impact on the environment, to support existing ecosystem services such as water retention and air quality and to support biodiversity through the planting of vegetation matrices, and wildlife-sensitive environments. Such projects support the resilience of the wildlife to environmental changes.

Resident populations can benefit from landscape projects through the supply of plants, and employment within the service industry of landscaping and landscape maintenance. Plant cultivation skills may be used in urban agricultural production contributing to food security in developing cities. Plant nurseries participate in biodiversity conservation through the cultivation of native species reducing collection from the wild.
Peer-to-peer skills exchange:
A tool for building local excellence in biodiversity conservation in small island developing states?


1. Background: the challenge of capacity development

Conservation wardens and rangers are still not widely accepted professions in the Western Indian Region (1). For Government protected areas, staff often come from a wide range of backgrounds and frequently conservation jobs are stepping stones in a civil service career. Other private, community-run, or NGO-managed protected areas, like Cousin Island Special Reserve, cannot offer a similar career path. Since this type of work has no clear professional structure, it may not be recognized seriously by national policy and decision makers, and it usually does not attract high calibre, well-prepared new recruits. This in turn does not lend itself to the development of competence standards, scheme of service and professional opportunities.

Cousin Island Special Reserve in the Republic of Seychelles became one of the world’s first whole island and sea reserves when it was designated a Nature Reserve in 1968 and a Special Reserve in 1975. It is host to biodiversity as well as conservation and ecotourism programs whose importance has been recognized globally. The management authority, Nature Seychelles, wants not only to maintain routine norms but to also meet international standards and challenges. Nature Seychelles management policy has promoted local staffing of the MPA and the Reserve is managed by Seychellois. The Reserve’s vision in its Management Plan is to strive to become the best-managed small island protected area in the world (2). However, the Seychelles is one of the smallest nations in the world, and has a tiny economy. With limited resources, technical skills, educational opportunities and international expertise available in-country, the organization needs alternative paths to achieving this vision.

Traditional forms of capacity-building and didactic training have been employed in Seychelles, and by Nature Seychelles for Cousin Island Special Reserve. The staff attend most available national courses, some organized by Nature Seychelles, others run by other agencies. Furthermore, training for Cousin Island Special Reserve staff, conducted in-house, uses a set of wardens’ manuals, but mainly relies on transfer of on-the-job know-how. Skills specific to an island are not always found in textbooks or training courses – how to land a boat in very rough surf, how to deal with trespassing local fishers, how to handle mosquito-bitten, sunburned tourists, and so forth.

Field training courses provided on Cousin are valuable, but costly in both time and finances, and need regular refreshing. Where formal education opportunities are limited, practical, hands-on learning is invaluable. Island conservation training needs are rarely met in the classroom. For small-island conservation, training has to deal more with improving vocational competence. Indeed, poorly planned, inappropriate training can even have negative effect on staff performance and morale, for example where expectations on a newly-trained staff are raised, while performance is not. One-size toolkits do not fit all, and in trying to conform to the textbook, initiative and performance may be constrained. Misunderstanding from training can also be detrimental, for example, in monitoring endangered species populations or in ringing or tagging birds or turtles.

2. Rationale, objectives and methodology

When practitioners face the challenges of conservation planning and management — financing, monitoring, enforcement, etc. — knowledge of how peers have addressed similar challenges can be invaluable. This sharing of lessons can take many forms. Among the most effective
and intensive, is the direct exchange of personnel between sites, allowing managers and stakeholders to experience first-hand how sites with similar goals and concerns do their work (3).

There are many conservation areas worldwide with a tremendous wealth of experience and expertise to share (4) that could be applicable to Cousin Island Special Reserve. In order to tap into this global knowledge and skills-bank, Nature Seychelles created the Experience Xchange Program, or ‘EXP’. This was structured as follows. Senior conservation wardens and officers from other parts of the world with a certain level of education and experience were invited to live and work with the Seychellois wardens on Cousin Island for up to three months. The expectation was that the local staff would benefit from working with personnel with higher levels of formal education and a different knowledge base. This ‘peer-learning’ process has proven to be very successful in other walks of life (5). Visiting experts can also view the prevailing issues and challenges with fresh eyes and propose novel or unexpected solutions. By living and working closely together, both parties could additionally form professional relationships and friendships (6).

The principal objective of the EXP was to provide Reserve staff with skilled, experienced colleagues with whom to share academic knowledge, ideas and tested skills so as to improve their own talent and leadership potential and to start putting together standard operating procedures. Secondary objectives were to backstop Cousin management and daily operations with international and qualified staff; and to develop institutional linkages with protected areas and professional ranger associations worldwide. The final objective was to provide exchange wardens with a platform – Cousin Island Special Reserve – to develop new experiences, skills and contacts.

Two visiting personnel were accommodated every 3 months between June 2005 and January 2007. The visiting personnel themselves, or their organizations, paid for the international airfare (and medical insurance where necessary) and Nature Seychelles provided local logistics, uniform, equipment, board and lodgings, and local insurance. The program was supported under a Global Environment Facility (GEF) project through the World Bank, with Nature Seychelles as the implementing agency. The program was advertised worldwide on the internet and registered interest from persons in some 50 countries.

3. The design of the program
Releasing the potential of individuals to carry out often difficult and complex work with limited resources requires sponsors, providers and employers to invest not just in fixed term courses or one-off workshops, but in developing a ‘learning environment’ where there is a clear framework for personal development and where individuals are continually encouraged and supported to develop, use and share new skills, knowledge and understanding (7).

The EXP seemed a promising prospect for sharing new skills and knowledge and to raise standards and motivation on the island. Visiting personnel could themselves gain a range of personal skills and valuable experiences that may be transferable elsewhere. Cousin Island Special Reserve also has the basis to provide a learning platform as a case study for wise practice. It has accumulated many acclamations. In 2000, it became the first reserve in Africa to be invited to join the International Biodiversity Observation Year (IBOY). In 2002, it was designated a Demonstration Site for the International Coral Reef Action Network (ICRAN). In 2003, it won an award under the British Airways Tourism for Tomorrow program. In 2004, it won the Condé Nast Ecotourism Award. In 2005 it was recognized as being “well run with an experienced team in place and substantial resources being invested in management”

Résumé
in a Management Effectiveness study of protected areas coordinated by UNEP and IUCN (8). Various management actions have also been positively highlighted in several case studies published internationally.

The challenge for Nature Seychelles was to select suitable candidates and to manage their expectations and preparations to best adapt quickly to island life on Cousin. Nature Seychelles was confident that, in general terms, island work involved relatively straightforward tasks, in an academic sense. Recruitment criteria focused on practical skill-sets and evidence of strong character and personable qualities. The idea was that a shoulder-to-shoulder approach would deliver results, especially in combination with a ‘downtime’, informal setting before and after work, in a small island setting with limited social distractions. Also, sharing daily work would help international staff integrate much quicker and to develop a better understanding of the trials and tribulations of a small island warden team.

Preparations for visiting wardens were outlined in a manual (8), updated with input from each visiting warden after their stay. For each prospective warden, expectations were managed to keep them as practical as possible. Candidates were invited to contact their predecessors for inside, candid information. In all cases, once selected, senior, experienced international staff undertook excellent preparations and arrived fully prepared to join the island team.

To attempt to formalize part of the exchange and learning, visiting wardens were asked to prepare a specific presentation, and were also offered a series of projects or project-based activities that they could assist with. In order to make the experience valuable for all parties, visits to nearby islands such as Cousine and Aride – both managed for conservation – were also arranged. Visiting wardens were also brought back to the main office on Mahe during their stint, to help resolve any outstanding issues (permits, bank, visa, medical, etc.).

The program was monitored and at the end evaluated based on interviews with both the visiting wardens and the local staff.

4. Results of the exchange experience

4.1 General

The program hosted senior conservation area personnel from England, Scotland, Australia, South Africa, Norway, Romania and Finland. Despite a strong push for candidates from the Western Indian Ocean countries, none could initially obtain the necessary resources to participate. Finally, a warden from a Kenyan MPA was hosted. To address this problem, Nature Seychelles approached regional organizations with the purpose of setting up a regional program involving a system of “sister sites”, but met with no success.

Cousin Island Special Reserve is a relatively remote work station. Although it is a mere 4 km from Praslin, the second most populated island of the Seychelles, it is a further 50 km to Mahe and the main office. Access by boat is difficult in bad weather, and the island infrastructure is basic, often with shortages of power, tools and supplies. Visiting wardens expressed dismay and puzzlement at the lack of supplies, equipment and materials in general in Seychelles (owing to across the board foreign currency restrictions in the country as well as shipping constraints). Slow and intermittent internet access was another source of frustration.

Despite existing management plans, protocols, handbooks and manuals, much of the day-to-day work on the Reserve is unspoken, tacit routine and know-how, expressed by staff almost at an intuitive level, according to some of the visiting wardens. This is especially true of time-planning and assignment of daily tasks. Initially, many of the visiting wardens could not automatically form part of the team because of this “system”. The situation was compounded – until recent changes – by the nature of the island’s highly successful ecotourism operation, which could require full use of the island’s manpower at any given time. Daily work-planning was highly dependent on tourist arrivals. This resulted in inadequate effectiveness of the Reserve staff for the broader conservation work program. Based in part on visiting warden recommendations, since October 2006, tours are scheduled for mornings only, allowing detailed advance planning for afternoon work schedules. This seems to be working well.

Language was one area where expectation was not matched with reality: English is a national language in Seychelles, and over 90% of the population is fluent. However, on the Reserve, the lingua-franca is Seychellois Creole. Although all reporting, memos and emails are in English, the Reserve wardens communicate, joke, and instruct in Creole. Regular staff meetings with the Chief Executive of Nature Seychelles on the Reserve are also largely conducted in Creole. This presented a largely unexpected barrier to visiting wardens. They could certainly be understood, but day-to-day communication in English was not preferred by the Reserve staff.

The Seychelles is a young country, a cultural melting pot of European, African and Asian migrants, with a predominantly Creole flavour. As with most small-island nations, family and personal ties are deep, inclusive and extensive. The Seychellois are also fairly guarded and introspective, at least on the surface, and it took time and effort to develop personal relationships, earn respect and be accepted.

During the eighteen-month timeframe, ten staff left the Reserve, and nine joined. The manager position changed three times. Anywhere, a high level of staff turnover seriously hampers capacity-development and training for Reserve staff, and certainly affected the EXP’s success on Cousin. For the first year, the staffing changes were disruptive to routine and island operations. Much energy was spent in managerial ‘fire-fighting’ rather than in focused skills-exchange and constructive use of international staff experience. Based partly on the suggestions and observations of visiting wardens, a staff Scheme of
Service is now in operation, two senior mentors were put in place as a medium term measure, a Cousin Conservation officer was recruited, a new operational base is running successfully on Praslin, and salaries have been increased. To date, this has resulted in stable management and in very low staff loss.

4.2. The visiting wardens’ perspective

Each visiting warden reported in detail on their stay, and provided structured recommendations on the EXP, as well as various perspectives on Reserve management. Individual projects undertaken by some of the visitors were completed, such as a study on waste management, invasive species control and a staff motivation and development survey report.

An overwhelming response was that the program was highly rewarding, but challenging at times. The experience was rich, but in many cases expectations were not fully met. However, the visiting staff who reported gaining the most from the experience were those who noted that they had made an extra effort to adapt and accept that different countries and cultures offer new perspectives and challenges. In all cases, these staff had worked or lived in developing countries before. Learning was based on a personal digest of life and work on the island, with all wardens relating their learning back to their own context and professional experience to date, in their country. All visiting wardens appreciated the very real challenges faced by the Reserve staff and Nature Seychelles in managing Cousin; yet all had very clear recommendations for improvements and adaptations.

A combination of flexible work planning on the island and a different work ethic made it difficult for visiting wardens to adapt quickly. By the time a three-month stint was completed, some of them had only just begun to ease into the island routine. A general recommendation was that the timeframe was too short, and that in order to be useful, at least six months would be required to overcome the settling-in period and begin to creatively and constructively participate in the island’s operation and management. However, given that most of the visiting wardens were on sabbatical or on study leave, away from family, had invested in flights and accepted a local wage, it was noted that three months was a more realistic timeframe for the current program.

The type of communication exchanges and the intuitive (to outside eyes often impenetrable) management style on the island confounded most visiting wardens. Efforts at formal exchange, such as group meetings, presentations and discussion of written reports, were mostly unsuccessful—poorly attended with low-levels of participation, Reserve staff excusing themselves saying they were “tired at the end of the day.” By turn, informal exchange of ideas and skills were tacit, with communications often being in non-verbal form and expected to be instinctively grasped, and therefore difficult to quantify, although undoubtedly valuable to the visiting international staff. Most visiting wardens felt that they had been able to exchange ideas with local counterparts. However, the lack of a formal mentoring program with targets and assessment criteria featured prominently in some of the visiting wardens’ reports.

Universally, visiting wardens confessed to poor understanding of local social dynamics, mores and folkways, both on the Reserve, and between the Reserve staff and the Praslin community. This was especially noticeable through surveillance patrols. Contact with trap fishers, where de facto and non verba arrangements that keep the island free of poaching incidences, seemed unorthodox to outside eyes and were certainly poorly understood. Three months were certainly not sufficient time to tune-in to the local dynamics and interplay of interests and to learn “small island social intelligence.”

Some of the visiting staff felt that their skills were not captured or employed, and at times even resented. They felt that their particular skills were wasted in “menial” tasks such as pushing boats to launch and land tourists, in maintaining an outboard engine or controlling invasive plants. This is not to say these tasks were not completed, but expectations of more formal, and higher level ‘skills exchange’, to assist the Reserve and adapt operating procedures, were not fully met according to the reports of some of the visiting wardens. That said, each also noted that they personally gained a great deal, thoroughly enjoyed the experience, made friends and professional contacts, and returned to their home country and workplace enriched by the experience.

4.3. The local wardens’ perspective

Despite the significant personnel changes, structured meetings with Reserve staff and management over the period were used to adapt recruitment and reshape the program. The overwhelming response from the local staff was that, on a personal level, they had enjoyed the company and contact with all of the different international wardens. However, the EXP did not meet all their expectations. All the visiting wardens possessed far superior general and specific educational qualifications compared to the Seychellois wardens, all of whom had only high
school certificates. But skills professed as desirable by Reserve wardens were not delivered — these included very specific, if diverse needs, such as languages (Italian and German), diving, fire fighting and any ‘certificate’ earning skills — in general training or courses that could be added to a résumé and improve the chances of finding work elsewhere in the future. Despite this, most local wardens admitted to have learned from their counterparts on a one-to-one basis.

Unfortunately, some resentment of the visiting staff was also noted in the meetings and evaluations. It stemmed from the supposed ‘special treatment’ that the visiting wardens, such as paid trips to Mahe Island, visits to neighbouring islands, and so forth. The expectation was that these visiting staff would work as local wardens, and should therefore be treated with equal privileges. This feeling was further expressed by some, in that, as equal to wardens with an equal workload and tasks, then why not employ Seychellois? Little added value was seen in inviting short-term overseas staff when a labour pool of capable Seychellois could be better engaged and employed. These sentiments are attributed to the high turnover of managers at that time, and poor communication, and therefore understanding, of the objectives of the program by the Reserve staff and supposed additional benefits for the visiting wardens.

Another issue was that the Reserve staff perceived the EXP as being used as a vehicle to achieve goals and get work done without dealing with particular concerns or negotiating an appropriate financial compensation deal with existing Seychellois staff — for example, having a visiting warden on a weekend beach patrol to look for marine turtles, which would be considered overtime work for Seychellois wardens.

For the successive Reserve Managers, often the extra effort and skills required to manage a new but experienced, well educated and enthusiastic exchange staff was a source of frustration and proved quite difficult, especially when the EXP staff did not immediately understand the local conditions, work culture, and language. Reserve staff felt under pressure to explain and justify their work and decisions to international “peers” (in most cases their seniors). Few Reserve staff, including managers, were open to discussing an alternate viewpoint or suggestions for improvement.

The final issue raised by Reserve staff was the ‘exchange’ opportunity afforded to the Seychellois. There was no provision for reciprocal visits for the Reserve wardens to, for example, Australia, United Kingdom, Kenya or South Africa, and this aspect was seemingly not followed up by management. In actual fact, with unstable staff numbers, new managers and changes in structure, sparing a suitable candidate for an expensive overseas trip was simply not feasible. When one particular opportunity did arise, the Reserve Manager was unable to go due to a lack of experienced boatmen on the island at the time.

Overall, it was admitted by Reserve staff and managers that the international support had provided a ‘backbone’ to island operations, especially in times of high local staff turnover, with visiting wardens always willing to work odd hours and weekends and to cover gaps. The high motivation and energy of the visiting wardens were often contagious, and local wardens admitted there were also a good deal of informal learning, friendship and shared experience.

5. Conclusion and lessons learned

The EXP has proved to be a great adventure, and valuable “living experiment.” It has teased out needs that were previously unknown or not conceptualized. The visiting wardens commented candidly on all aspects of island life, to their colleagues and manager on the ground, and to the administration and technical staff at Nature Seychelles. This has helped clarify and open up discussions on several key management issues and, in conjunction with other programs and projects, solutions have been developed and implemented by Nature Seychelles, such as the creation of a Cousin Conservation Officer position, an Island Coordinator post as a “de-centralized” alternate to the Nature Seychelles’ CEO, and Scheme of Service for Reserve staff with additional pay scales and overtime payments. The EXP has delivered valuable lessons in staff recruitment and administration needs, highlighting the considerable work involved with recruiting, hiring, and contracting, supervising and managing short-term professional staff.

Nevertheless, the experience showed that whilst it may be easy to transfer information from one place to another, transfer of knowledge, on the other hand, is more problematic. The EXP experience reinforces the belief held in business management circles that it is difficult to transfer knowledge, especially tacit knowledge (knowledge tied to physical experiences, and intuition), from one person to another. In fact, experiences in business show that such tacit knowledge is often very difficult to describe to others (10).

Perhaps then it does not come as a surprise that evaluation against the main objective of the EXP shows only partial success. Although the Reserve staff and management said they gained valuable experience and lessons from their international colleagues, this was difficult to measure. Perhaps more formalized exchange and learning frameworks are needed. It was also suggested that a longer stay would be required, with a more formal role and clearer expectations defined, and keener management supervision on the ground. However, the contextualized work experience and formal education levels of the visiting wardens seemed to become an impediment on both sides, with high expectations by the visitors and with the Seychellois wardens seemingly not quite understanding their viewpoints and concerns and in some instances even resenting questions and suggestions. Von Krog and colleagues state that the sharing of tacit knowledge among individuals with different backgrounds, perspectives, and motivations is a critical step for organizational knowledge creation, but the individuals’ emotions,
The high motivation and energy of the visiting wardens were often contagious, and local wardens admitted there were also a good deal of informal learning, friendship and shared experience.

feelings, and mental models have to be shared to build mutual trust (11). Obviously this sharing was not fully achieved in the EXP, perhaps because of time, education, cultural and language constraints, although it is to be noted that the Kenyan warden seemed to integrate well. One solution would be to consider more focused, hands-on skills assistance, such as turtle monitors, or seabird census assistants, rather than senior wardens. In addition, allowing a specific task or project to be undertaken and completed by a visiting warden may still allow for both informal and formal learning and exchange, but with a clearer, objective focus. Although this may not bridge the divide between foreign visiting staff and local wardens, it may also, in defining clearer roles and responsibilities all round, prove to be a better platform for building relationships and personal exchange with the Reserve staff, as recommended by Simpson & Bugna (12) in the Philippines. Nature Seychelles started the Helping Hands Program, with budding conservationists working on specific programs on Cousin during their Gap Year, as a different kind of experiment in capacity assistance.

Secondary objectives – to backstop island management and operations with internationally qualified staff and to develop broader international networks – were accomplished. Visiting wardens’ recommendations have helped shape the island’s new Management Plan to 2012, and indeed a revised management structure, with more focus on structured conservation work and streamlined time-planning. Overall, Nature Seychelles has benefited from an excellent use of international experience and insight to help evaluate management and as a result propose and implement several shifts in Nature Seychelles’ strategic direction for the Reserve. All round, international staff have been motivated and proactive, and they have demonstrated to Nature Seychelles what can be achieved, improved or developed. In the mission to improve and seek excellence on Cousin, this has been invaluable. In other areas, particularly boat-handling, alien species abatement, collaboration with local stakeholders, control of poaching, sustainable financing and in delivering a bespoke ecotourism product, the visiting staff have confirmed the notion that these are already at enviable standards.

One of the key challenges to date has been the lack of opportunity for the Reserve staff to themselves ‘exchange’ with visiting wardens home parks and protected areas and even training events and specific ranger courses. None of the visiting wardens had any success in follow-up with his/her own management to assist in this aspect or to organize, administer or manage appropriate contacts and connections within the overseas organizations or parks. The main constraint to this reciprocal exchange is seen to be funding. It is hoped that Nature Seychelles, through its regional networks, can develop a mosaic of ‘sister sites’ in the Indian Ocean.

This relates also to the final objective, which was achieved. The EXP has successfully highlighted the potential of Cousin Island Special Reserve to act as a demonstration site and learning centre for other conservation staff with a structured learning program, involving two-way exchange and addressing specific needs, Nature Seychelles could feasibly develop an international small island conservation skills and management learning program, challenging participants to interpret constraints and opportunities and apply solutions in situ in a practical, small-island setting. Combined with formal theoretical and broader-spectrum modular training, Cousin Island Special Reserve could become a national, regional and international resource for professional staff at all levels.

Finally, the EXP experience has underlined some implications for any ‘nationalization program’ for a conservation or development organization, institution or site. Cousin Island Special Reserve, managed and run by Seychellois staff and a national NGO, has rightly taken pride in its achievements. However, the challenge is to remain contextualized nationally, and yet still garner international advice, expertise and other support. Where is the line to be drawn, and at what point does international assistance become a loss of national opportunity? The EXP highlighted examples where international personnel were potentially mobilized at the possible expense of coaching and developing local capacity, despite the program design and intentions. However, it has also highlighted the role and pertinence of external, experienced perspectives on the internal dynamics of a conservation area and its parent conservation organization and on the interplay between skills and knowledge management and human resource management in particular. At the end of the day, on a small island protected area, in a small-island developing state, the pursuit of excellence has to be the priority and requires a strong mix of local knowledge with external expertise, not just to maintain standards, but to take conservation success to another level.

References
(12) Simpson S, Bugna S. Handbook for Protected Area Rangers and Field Workers. ASEAN
Loss of native biodiversity and ecosystem disruption

Introduced invasive species have had a tremendous impact on Seychelles ecosystems. The ecological trauma created on the archipelago by human colonisation, which started only in 1770, is in great part due to the simultaneous arrival of invasive species. The fact that much of the original forests of Mahé had already been cleared by 1819 must have greatly facilitated the spread of these new plant colonisers. Some statistics on the proportion of exotic species in the flora of Seychelles and its main island groups exist but require reviewing and updating. In 2010, the Seychelles Biodiversity Metadatabase (1) had registered a total of 931 alien vegetal species, representing 63% of all the plants recorded in the whole of Seychelles, and this number keeps increasing. A previous study (2) indicated a proportion of 72% of exotics (c.265) out of the 370 woody plants recorded from the granitic islands. The percentage of land area dominated by alien plants is probably of the same order of magnitude and represents clearly the majority of the country’s land area. However, the proportion of alien species in the vascular flora (particularly woody plants) of the coraline outer islands appears to be significantly less important, especially in the raised limestone southern atolls of the Aldabra group where much of the land is still occupied by native vegetation. In the granitic islands, much of the lowlands and mid-altitude forests are nowadays covered with invasives such as Cinnamon, Albizia, White Cedar (Calice du Pape), Devil Tree (Bois jaune) or Cocoplum (Prune de France), which had originally been introduced for spice production, timber or fixation and retention of soils before becoming invasive.

Some of these fast growing species form dense thickets while others develop strong belowground interactions that affect other plants, and some invasives can even emit chemicals that prevent regeneration from other vegetals around them. The arrival of so many new plant competitors, and the combined negative effects of invasive animals such as introduced insects responsible for increased defoliation or competing with natural pollinators, or seed-eating rodents, has considerably disturbed the biology of plants. Apart from outcompeting native vegetation, alien invasive plants affect indirectly native animals (herbivores, frugivores or insectivores). This must have played a key role in the drastic reduction in range and numbers for many endemic plant or animal species, some of which now survive only in small habitat refuges. In 1996, of the about 250 woody native flowering plants present...
in the granitic Seychelles, up to 21% (54) were considered threatened under the criteria of IUCN (3). Several species such as the Jelly Fish Tree (Bois méduse) are still on the verge of extinction and some may have actually become extinct even before they could be discovered or described. The impact of introduced invasive mammals such as rats and cats, known to be responsible for many extinctions and population declines of native islands vertebrates worldwide, has also been tremendous in Seychelles. A number of endemic birds (e.g. Seychelles Magpie-Robin, Seychelles Warbler, Seychelles Fody), once reported abundant in the larger granitic islands by early explorers, became later endangered and restricted to only one or few small islands free of rats and cats, which speaks for itself. The same probably applies to several endemic invertebrates (Whip Spider, Giant Tenebrionid Beetle) and reptiles (Wright’s Skink). The fact that all six Important Bird Areas for seabirds in the central archipelago are small islands that were never – or only for a relatively short period of time – invaded by rats and cats, is also suggestive of the very high negative impact that these mammals – which prey on eggs, chicks and adults – can have on seabird colonies. On Aldabra, the flightless Aldabra rail is only found on cat-free islands.

The three recorded extinctions of endemic birds in Seychelles (Chesnut-flanked white-eye; Seychelles Parakeet, Aldabra Warbler) were probably also caused by rats and cats (and indirectly by goats for the warbler) and other factors like habitat change and persecution. It is likely that some native endemic birds and possibly other animals too became extinct before they could be described. The African Barn Owl was introduced in the 1950s to control rodents, but it spread dramatically to all islands and made the situation worse by predating on seabirds.

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Socio-economic impacts

One of the human activities most impacted by IAS is agriculture. Alien invasive weeds are mainly creepers, herbaceous plants and some shrubs such as Lantana camara which lead to losses in crop and agricultural land. Little data is available on estimated economic costs of invasive species in Seychelles. For example, rats alone can inflict losses of 15 to 30% (including before and after harvest) for fruit, vegetable and root crop production in Seychelles, estimated at up to US$1.3 million per year, and possibly more. In the case of the Melon Fruit Fly, annual losses in fruits and vegetables were estimated at more than US$2.2 million in 1999, and could potentially affect up to 60% of the affected crops (cucumbers, pumpkins, melons, squash, gourds etc.). Invasive species also have a high impact on public health, as many infectious diseases for humans (or animals) are themselves alien invasives, or maybe introduced by invasive animals that are carrying and transmitting them. The Tiger mosquito (Aedes albopictus) is
an important vector for the transmission of many viral pathogens and viruses, including chikungunya, yellow fever encephalitis and dengue fever. The 2005 - 2008 chikungunya outbreak cost the Seychelles an estimated total of US$1.9 million in lost revenue in terms of the Gross Domestic Product, medicine and disease control. Rodents are vectors of diseases such as leptospirosis, salmonellosis, hepatitis, plagues, murine typhus or Rat-bite fever. Every year, 30 to 70 persons infected with leptospirosis (85% of whom are men) are recorded in Seychelles, including over half a dozen fatal cases; this is one of the highest infection rates in the world (1/1000 inhabitants) and it occasions more fatalities than AIDS. The Ministry of Health estimated in 2008 that the total cost of medical treatment for rat-transmitted diseases to nearly US$1.5 million. In addition, rodents cause every year important diseases to nearly US$1 million. In 1994, and the estimated annual cost for telecommunication alone was estimated at US$0.5 million some years later.

Tourism is also affected by invasive species like rodents, especially in small islands where outbreaks may have devastating effects in terms of image. This also played a significant role in the decision to eradicate rodents from private islands hosting hotel resorts or involved with other forms of tourism, in addition to obvious environmental and sanitary gains. Indirect costs, such as expenditure for prevention measures, which amounted to US$65,000 per year for quarantine and border control in Seychelles, need also to be taken into account. During the mid-2000s, total annual cost of pesticides ranged between US$1 to US$4 million. Economic impacts of environmental damages also add to the indirect costs incurred from invasive species, and represent for example the expected loss in terms of visitors revenue in islands or nature reserves currently predator-free or creeper free if these were reinvaded. The overall economic direct impact of rodents alone in Seychelles’ economy were estimated at US$2 million in 1994, and extrapolated to possibly US$3 million in 2007. In 2009, a study (4) suggested that the overall economic damage of six major IAS (rodents, feral cats, melon fruit fly, invasive woody plants, creepers and the Takamaka wilt disease) in agriculture, human health, infrastructure, plus biodiversity and conservation sectors may have amounted to US$23.8 million, plus an extra US$7 million spent on efforts to limit damage, i.e. a total of US$31 million per year. Subsequent cost-analysis showed that prevention is by far the most cost-effective strategy, compared to eradication (when feasible), the latter being also a better option compared to control.

Number of confirmed cases of leptospirosis per year (source: Ministry of Health).

Résumé
Les herbes envahissantes étrangères, les organismes nuisibles, ainsi que les microbes destructeurs ont pendant longtemps été perçus comme étant les plus importantes menaces à l’agriculture, la sylviculture, la pêche et la biodiversité. Les espèces exotiques envahissantes (EEE) représentent le plus grand danger à la biodiversité dans des écosystèmes isolés et vulnérables comme ceux des petits États insulaires. La Convention sur la Diversité Biologique définit une EEE comme étant « une espèce exotique dont l’introduction et/ou la propagation menace la diversité biologique », ce qui signifie qu’une fois introduite dans un nouvel écosystème, une espèce étrangère génère un impact négatif en empêchant la croissance et le développement des plantes indigènes ou des organismes existants et en modifiant leur environnement naturel pour faire croître son ascendance à elle. Il existe plusieurs de ces plantes et animaux étrangers aux Seychelles aujourd’hui et leur impact, à la fois sur l’environnement naturel et sur l’économie est considérable.

References
The melon fruit fly: A challenge for Seychelles agriculture

By Will Dogley, Seychelles Agricultural Agency

An important number of Invasive Alien Species are agricultural pests. The Melon Fruit fly (scientific name: Bactrocera cucurbitae) is a good example of a recent biological invasion which has been causing substantial economic damages. Native from Asia, it first colonized Mauritius and La Réunion, and was first observed on Mahé in November 1999, near the airport in a surveillance trap, probably introduced through an in-flight meal containing fresh fruit and/or vegetables which were not properly discarded. By 2003, it had colonised most of the granitic islands of the archipelago.

The melon fly is considered the most destructive pest of melons and related crops; and more than 125 species of host plants, including cucurbits, tomatoes, and many other vegetables, have been recorded. This rapid invasion was considered a ‘national disaster’ since all cucurbit – by far the biggest agricultural vegetal production in the country – were severely affected; the production of melon and watermelon (more sensitive species) became almost impossible, whereas other species a little more resistant such as cucumbers, pumpkins, squash, chayote, zucchini, experienced severe decreases in yields. In late 2000 its economic impact was estimated at 2.2US$million per year with a loss of up to 60% in the production of the most important cucurbit crops (e.g. pumpkin, cucumber, melon, snake gourd, bitter gourd, calabash gourd). Many farmers had by then decided to abandon these crops altogether because of the high level of damage during production and after harvest.

In Seychelles, the melon fruit fly was initially subjected to an eradication attempt using a combination of bait spraying and male annihilation (MAT) blocks. Control methods that can be used effectively by farmers and gardeners in Seychelles include sanitation (destruction of infested, fallen and overripe fruits, and the proper disposal of crop residues), pheromone traps with Cuelure for monitoring and mass trapping, bait sprays (BAT) with Protein Hydrolysate liquid attractants plus Malathion, use of baited traps or Male annihilation (MAT) blocks, wrapping of fruits with a protective covering or bags, among other techniques. A new control project in collaboration with the IAEA (International Atomic Energy Agency) envisages to use the Sterile Insect Technique, whereby male insects are mass reared, exposed to radiation and rendered sexually sterile, and mass released to mate with native females to prevent reproduction.

Although the eradication programme did not succeed in eradicating the pest before it had established itself and spread to other islands, it nevertheless managed to keep the fruit fly population relatively low, reduced damage to crops and lead to positive socio-economic impacts such as improvement in the quantity and quality of locally-produced crops, better prices for the consumers, a reduction in imports of certain cucurbit crops and higher incomes for farmers. The project
also achieved increased awareness of modern and improved farming practices, and renewed motivation to invest in cucurbit crops. Capacity building included various training sessions for technicians, farmers, gardeners and other key stakeholders, and many valuable manuals, brochures, posters, leaflets, and other publicity materials were produced. An emergency response system has been established to protect the country from unwanted invasive alien species, with a network of traps, two incinerators and trained personnel able to fight future invasions by quarantine pests. The pest control methods adopted have been geared to be as environmentally-friendly as possible, and an integrated pest management approach was put into practice. Sustainability of the project will depend on continued government support as well as on partnership between public and private sectors. Lessons learnt could be replicated in other similar situations or adapted to new contexts, particularly in small island developing states.

**Melon fruit fly: identification and biology**

**Adult:** 6 to 8 mm in length. Distinctive wing pattern, long third antennal segment, dorsum of the thorax reddish yellow with light yellow markings and without black markings, and head yellowish with black spots. **Egg:** pure white, about 2 mm long, elliptical, nearly flat on the ventral surface, more convex on the dorsal, often somewhat curved. **Larva:** white, may appear colored by food within the alimentary canal; has a cylindrical-maggot shape; 75 to 12 mm in length (last instar larvae). **Pupa:** 5 to 6 mm in length, dull red or brownish yellow to dull white, according to host. **Development cycle:** 12 to 28 days, depending on host and weather conditions. Female lays up to 1,000 eggs, in young fruit, also in succulent stems or in ripe fruits for certain host plants. Pupation normally occurs 2 inches beneath the host. Adults may live more than a year, feeding upon juices of host plants, nectar, and honeydew from various insects. Up to 10 generations per year.

**Résumé**

Plusieurs espèces exotiques envahissantes sont de véritables parasites pour l’agriculture. La mouche du melon (de son nom scientifique : Bactrocera cucurbita) est un exemple type de la récente invasion biologique qui a causé des dégâts substantiels sur le plan économique. Originaire d’Asie, elle a en premier colonisé Mauence et la Réunion, avant d’être observée pour la première fois à Mahé en novembre 1999, près de l’aéroport, prise au sein d’un dispositif de surveillance. Elle avait probablement été introduite par le biais d’un fruit frais faisant partie du repas servi à bord d’un avion ou à travers des légumes qui n’auraient pas été proprement détruits. En 2003, elle avait colonisé la plupart des îles granitiques de l’archipel.

**References**

Pedagogical reform in small education systems: The Mathematics Lesson Structure in Seychelles

By Justin D. Valentin (University of Seychelles)

The reform genesis

The mathematics lesson structure or MLS reform, a mandatory teaching approach in the primary schools in the Seychelles, was introduced (a) encourage a more coherent structure to mathematics lessons. (b) provide variations in pupils’ learning experiences and (c) stimulate school-based teacher-learning. Of concern then, was the need to alter the characteristics pedagogical flow (Schmidt, 1996) which the Mathematics Working Group felt was not being effective. The structure was inspired by the National Numeracy Strategy (NNS), mainly the three-part lesson structure (DFEE, 1999) which was in place in schools in the UK. Since the mathematics lessons in Seychelles then generally lacked proper structure it was thought that an adapted version of the UK model would help improve the situation. An action research targeting teaching of mathematics was initiated and MLS was developed and introduced in schools (Valentin, 2007). The MLS presents a model for structuring mathematics lessons. Table 1 shows how teachers were expected to structure a 40-minute mathematics lesson using the MLS template.

Additionally, the teachers were required to vary the pupils’ organization, teaching strategies, and the medium of presenting learning tasks with the aim of dealing with mixed-ability learners. More fundamentally, the teachers were being guided to move away from the procedural approach of viewing mathematics learning to one which emphasizes the principle approach (Lampert, 1986) while at the same time creating classroom moments for rich mathematical discussions (Spillane & Zeuli, 1999).

The implementation of MLS in schools was monitored by the Mathematics Working Group supported by the subject leaders. School reports were analyzed to ascertain teachers’ perception and impression of the reform ideas in their teaching. Lessons were observed and appraised to support teachers with the various aspects of the process. Informal discussions with teachers were conducted to gauge the effectiveness of the structure. On a more systematic level, national surveys were done to inquire into the teachers’ practices. This article however, draws on a study conducted over five years into the reform (Valentin, 2013). Data which source this article are drawn from a) a questionnaire administered to teachers involved with the teaching of mathematics in primary schools; b) focus group interviews with teachers in four case study schools; and c) focus group interview with a sample of eight mathematics subject leaders from different schools. In my analyses, I sought to develop an understanding of the contributions of the reform which I shall discuss in the successive sections.

### Teachers and their pedagogies

Teachers strongly endorsed MLS as an effective teaching tool and felt that the reform has benefited their practices in a number of ways. Responding to how often they use MLS as a basis for preparing their lessons, the results indicate that the teachers showed high adherence to the call...
to incorporate the reform into their daily lessons. Most of them (99%) reported ‘always’ or ‘most of the time’ to this question. Only two teachers responded ‘rarely’. In the interview data, the teachers commended the structure for facilitating coherence, a feature which was seldom present in most lessons prior to the implementation of the reform.

Nine items of the questionnaire required the teachers to rate, using a four-point scale, their level of agreement or disagreement to each statement. Amongst, there was a general statement which was intended to gauge the extent to which teachers felt the introduction of MLS was a good idea. The eight other statements attempted to identify specific aspects of the MLS which might provide further information to explain teachers’ views on how they felt about MLS in their teaching: for example, an indication as to whether MLS was limiting their practices, whether the template was a useful tool, and whether MLS was having a positive impact on their teaching. Altogether, 90% of the teachers agreed or strongly agreed that it was a ‘good idea to introduce MLS in school’. I used the teachers’ responses to this question and correlated them with the other eight items to establish a relationship between the teachers’ acknowledgement that it was a good idea to have MLS, and their responses about its functionality (see Table 2).

### Table 2 Correlation coefficients between the item, ‘It was a good idea to introduce MLS’, with eight descriptive variables.

<table>
<thead>
<tr>
<th>Descriptive variables</th>
<th>Correlation values</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS is having a positive impact on my teaching</td>
<td>** 0.81</td>
</tr>
<tr>
<td>MLS is applicable at all levels</td>
<td>0.13</td>
</tr>
<tr>
<td>MLS does not restrict teachers’ creativity</td>
<td>** 0.32</td>
</tr>
<tr>
<td>MLS does not limit what I can do in class</td>
<td>** 0.31</td>
</tr>
<tr>
<td>I find MLS a useful tool</td>
<td>** 0.27</td>
</tr>
<tr>
<td>Maths teaching has improved with the introduction of MLS</td>
<td>** 0.51</td>
</tr>
<tr>
<td>MLS has motivated me to like the teaching of mathematics</td>
<td>** 0.50</td>
</tr>
<tr>
<td>MLS offers scope to deal with mixed ability teaching</td>
<td>** 0.44</td>
</tr>
</tbody>
</table>

**Significant at .01 level (2 – tailed)**

Data from Table 2 reveals that significant correlation coefficients are recorded for seven of the eight descriptive variables. The item that is most positively correlated is an appropriate indicator of the potential of MLS to make changes to the way teachers were teaching. This begins to create a reason why teachers were positive about this innovative teaching model. Prior to MLS, little thought was given to the structuring of lessons. The MLS forced teachers to look at their mathematics lessons differently and to concentrate on the mathematical ideas that they wanted to pass on to the pupils. These could be some of the reasons why they felt their teaching had changed through MLS and, since they thought that introducing MLS was a good idea, the change is assumed to be in a positive direction: that is, they felt that their teaching had improved. The correlation of the key statement with the statement ‘mathematics lessons have improved’ is 0.51 and significant. The key statement correlates strongly and significantly too with the teachers’ feeling that MLS had motivated them to like the teaching of mathematics (r = 0.50), and teachers’ feeling that MLS assisted them in the teaching of mixed ability classes (r = 0.44). Apart from one item (MLS is applicable at all levels of the primary cycle) which showed a weak correlation with teachers’ feeling that it was a good idea to introduce MLS in schools (r = 0.13), all the remaining items correlated moderately with this key statement.

The greatest criticism of the MLS was that it is rigid and too prescriptive. Such rigidity imposes instructional constraints on teachers which they argue interfere with other classroom obligations such as marking homework, assigning of tests and attempting correction on a whole class basis. Whilst MLS makes no provision for teachers attending to these obligations, it does not also state that it should not be done. Evidently, teachers who have applied the reform uncritically or have been seeing it as a rule to obey would have serious difficulty in incorporating these obligations in their actual practices.

The teachers also reported that they were challenged pedagogically and cognitively as they attempted to renew their practices. Elements of the reform which required them to apply high cognitive skills were viewed as difficult to implement in the lessons. Typical to this issue is the question of selecting real life examples to incorporate into the lessons, setting challenging tasks, formulating a proper lesson conclusion, and developing lessons with investigative features. Teachers’ responses to how often they incorporated each component of MLS in their teaching indicate the following: a) the percentage of teachers responding ‘always’ was high for those aspects occurring at

*Teachers strongly endorsed MLS as an effective teaching tool and felt that the reform has benefited their practices in a number of ways.*
The fact that the teachers failed to incorporate some critical aspects of MLS in their teaching introduces the issue of teacher competency and capacity.

The implementation of MLS had resulted in an increase in teachers’ workload. During the focus group interviews, one teacher, BET06, for instance, described the requirements, a plan for each lesson, as too much paperwork. She argued, “...before that [before MLS] if we had 2 lessons during the day we prepared only one lesson plan. But for MLS we have to prepare one for each lesson.” Her colleague, BET02, explained, “You have to think of the different strategies that you need to bring in the lesson. You should not be doing the same strategy always. You need to have different lessons every day.” This observation corroborates with data from the other schools regarding the issue of increasing instructional demand as a result of using the structure. At Gamma Primary, the teachers criticised the amount of time devoted to planning as a consequence of implementing the reform. Some teachers were against the notion of producing plans for every lesson, especially when they had two different periods of mathematics for a class on a single day. “Why do I have to plan all these lessons? I know what I am doing.” (GAM06). Teacher 1 from the same school added: “How come when we have double period we prepare only one lesson but when it’s two periods in a day, [it has to be] two lesson plans?” (GAM01). According to their responses, there seem to be two issues in the debate: (1) the number of lesson plans they had to prepare, and (2) the possibility of collapsing segments of the lesson structure to lessen the demand on planning time. What I gather from their arguments is that some successive lessons could be merged, in which case not all lessons would have to consist of all the MLS components repeated throughout. The teachers’ challenges were further revealed from the subject leaders’ responses about the use of MLS in schools. However, whilst the leaders converged on the issues that most teachers had demonstrated high motivation to change, some believed that there were cases where teachers could not fully apply themselves to the change they were being asked to do. There were several instances of mismatches between written lesson plans and actual lesson delivery. The mismatches, as most leaders explained, were not due to the adaptation of the lessons, but to the teachers’ inability to apply the strategies as they were expected.

Leadership benefits

The subject leaders talked convincingly about how their work had changed. All eight leaders in the sample agreed that the outcome of their lesson plan inspections was no longer simply a report telling the teachers that their lesson was weak or strong, but one which could provide ameliorative feedback. The subject leaders saw MLS as a lens for viewing lessons: “Now I know what to look for when I observe lesson” [L03]; “I can tell whether a teacher has planned a lesson or not” [L04]; “I am no longer lost in class when I observe my teachers” [L06]. The MLS reform was indeed a search for quality and an effective model for mathematics lessons. It needs to be emphasized here that the mathematics leaders in Seychelles were drawn from the teaching pool. They too fell into the category of teachers who were locally trained
and who had little exposure to recent advancement in mathematics education. It could be possible that for them too, what constitutes effective mathematics lessons was unclear. They too were not confident in advising teachers on their instructional practices. When the MLS reform project started, some of the leaders showed a lack of confidence in telling teachers whether some of their techniques or approaches were appropriate, given the characteristics of pupils under their care. The MLS, as revealed in the leaders’ focus group discussion, represented a model of what constitutes effective mathematics lessons.

The subject leaders’ remarks with regard to how MLS had assisted their daily duties also brought out the issue of MLS being a needs identification tool: “Teachers’ inability to apply themselves with the reform general ideas were apparent and I was able to organise training or support visit for them” [L04]. Quality of lessons, in other words the standard that was being built with regard to mathematics lessons in primary schools in Seychelles, was measured against the MLS.

A context for change

The data indicate that the teachers’ learning ambiance and the school-based support structures have changed. The leaders viewed this change as a context to teacher-teacher collaboration and a context to review school-based approach to curriculum improvement support. The many new ideas introduced to teachers incited them to collaborate to support one another. This point was revealed even by the teachers in their interviews, when they stated that they had begun team planning in schools. Schools with more than one class per year group benefited from this approach. Their teachers could group and share ideas, while those in one-stream schools had not benefited much. So, with the arrival of MLS, there had been more instances of team planning in schools. “Teaching is no longer a solitary activity in my school. Most teachers look forward to team planning and networking sessions” [L05].

Furthermore, support is not only a matter of team planning. In some schools, teachers even tried out the idea of peer teaching. Some leaders in a same region went as far as initiating networking. The introduction of end of cycle assessment and target setting had resulted in more schools having to network with each other. Networking had become a popular activity amongst schools in the South Eastern part of Mahé, and at least with two schools in the northern part of that island. These occurrences suggest that the context for reviewing school-based approaches to curriculum improvement support has changed considerably.

Conclusion and implications

This paper addresses the impact of the reform on teaching by looking into the teachers’ and subject leaders’ practices. The results presented in the preceding section are evidence supporting the contributions of the reform. The reform was consistent with the instructional needs. The implementers have positive impression of this reform. Receptivity, a key factor for success of classroom change initiatives (Ma, Yin, Tang, & Liu, 2009; Waugh & Godfrey, 1993), can be used to make sense of this positive impression the implementers had of MLS. Receptivity creates an initial ground for the reform ideas to be received and attended to. Evidently, the teachers have pivotal roles in schools and they are essential to the success of policy implementations and reform aspirations (Fullan & Stiegelbauer, 1991). But teachers nevertheless, respond to reform that they believe will benefit both their practices and their pupils’ learning (Spillane, 1999). I infer from this study that the teachers had felt MLS would play that role. Likewise, the leaders had realised that the reform would improve their leadership capacity; hence they had strong receptivity towards it. However, the observation that the teachers were highly compliant with the reform may be challenged on the ground that the reformers were themselves the facilitators, and to some extent they were the evaluators. It may be possible that the approach used to investigate into their practices might not have been reflexive enough to generate variance in their responses. At the same time, I argue that it could be possible that the teachers had wanted something similar to MLS to revamp their practices, and this could have been the reason why they were all positive and highly complied with the reform call throughout.

The fact that the data suggest that the teachers were challenged to implement the most cognitive aspects of the reform...
This study has implications for further research and teacher education. The approach to reforming the teachers’ practices advocated the cascade training method (Wedell, 2005). Such method may be effective in training teachers on site using localized resources – certainly very cost-effective for small states. Nevertheless, more research is required to ascertain the benefits of this approach to teacher learning. Since small countries such as Seychelles cannot afford to release teachers on long term training, it is imperative to design reform activities so that teacher learning takes a central focus. The need for parallel planning. International Journal of Educational Reform, 19(5), 565 - 578.

References

Résumé
La réforme structurelle de la leçon de mathématiques dans les écoles primaires des Seychelles représente un cas intéressant dans l’analyse des résultats découvrant des initiatives visant à amener un changement dans la façon d’enseigner dans les petits États en voie de développement. Cette réforme obligatoire fut introduite afin d’encourager la mise en place d’une structure plus cohérente pour les leçons de mathématiques, et dans le but d’apporter des variations dans les expériences d’apprentissage, tout en stimulant l’apprentissage des profs à partir de situations de classe. Cette communication émane d’une étude majeure faisant usage des informations dispensées par ceux chargés d’implémenter la réforme en vue d’examiner son impact sur les pratiques d’instruction. Nous nous référons aux informations obtenues à travers : a) des entrevues conduites auprès des enseignants dans quatre écoles retenues pour l’étude et auprès des responsables de matière provenant de huit écoles ; b) des questionnaires administrés à un échantillon de profs qui enseignent les mathématiques au niveau primaire (79%) ; et (c) des entretiens individuels menés auprès de deux informateurs. Les résultats démontrent que la grande majorité des enseignants étaient favorables à la réforme. Ils ont fait état de plusieurs avantages liés à la gestion de leurs leçons, bien qu’admettant avoir été contraints d’inclure les aspects les plus cognitifs de la réforme dans leur pratique. Les responsables de matière ont, quant à eux, admis que la réforme avait amélioré leur façon d’enseigner, ainsi que leurs capacités de leadership. Cette communication fait état des implications pour le développement professionnel de l’enseignant à partir des situations d’école, pour la formation des enseignants et pour davantage de recherches au sujet de l’implémentation obligatoire des programmes au sein des systèmes éducatifs de petite envergure.

Since small countries such as Seychelles cannot afford to release teachers on long term training, it is imperative to design reform activities so that teacher learning takes a central focus.
Conference Theme

The Government of Samoa has selected “The Sustainable Development of Small Island Developing States through genuine and durable partnerships” as the overarching theme for the 3rd UN conference on SIDS scheduled to be held in Samoa in 2014. The dates of the conference were confirmed at a meeting of the United Nations General Assembly on Friday, 17 May 2013 in New York that the conference will be held in Samoa from 1-4 September 2014 to be preceded by other important conference-related activities from 28-30 August 2014, also in Apia.

The selected theme highlights the high regard Samoa has for the critical role, the contribution and strength of Samoa’s partnerships with its development partners that it has enjoyed over the years based on the principles of trust, confidence and respect. These partnerships have helped Samoa make good progress with its development agenda as demonstrated with Samoa’s graduation from the list of LDC as well as support for our efforts in areas such as climate change (adaptation and mitigation), renewable energy, resilience to natural disasters, and many others. To translate the theme into tangible outputs and to give it centre-stage platform, Samoa proposes that the 2014 Conference be the launching ground for concrete partnerships between and with SIDS.

Kinds of partnerships

Samoa views partnerships in their totality – they should not be the exclusive domain for North-South, South-South and triangular partnerships only. A vital component should be SIDS-SIDS partnering amongst themselves and SIDS, both individually or together, working collaboratively with their partners. The latter has the potential of overcoming some of the disadvantages many SIDS face – small markets, small private sectors and economies of scale. Importantly, partnerships for sustainable development successes are shared and celebrated and failures are corrected and not apportioned.

Target 8.C of the 8th Millennium Development Goal on global partnership for development addresses the special needs of SIDS and Landlocked Developing Countries. Thus overall, MDG 8 underscores the critical role of partnerships without which, the prospects for economic progress and sustainable development for countries like Samoa would continue to look bleak and remain an elusive goal.

Partnerships need not be restricted to traditional development partners and partners. They should also include the active engagement of civil society, private sector, other major groups, the UN and many others. Partnerships constitute a shared agenda among all partners involved, consolidated through commitments towards mutual accountability, shared risks and a focus on results.
Towards a framework for investigating
Language-in-education policies in second-language medium of instruction contexts

By Mats Deutschmann, Umeå University, Sweden & Justin Zelime, University of Seychelles

1. Introduction

The choice of medium of instruction (MoI) in education is a central language policy issue. While much evidence suggests that teaching a child in his or her first language offers the best chance of educational success, the choice of the mother tongue as MoI is not given in large parts of the world. Due to a colonial legacy and current globalization trends, many African countries, for example, are using a second language (L2) to teach other subjects across the curriculum from an early age. Such policies have an impact on the entire educational process since mastering the ex-colonial L2 (primarily English or French) becomes a prerequisite for also mastering content material in all other subjects. Current language-in-education policies have been linked to educational inequity, substandard teaching practice, low literacy skills, poor overall performance, high dropout rates, and, at times, total exclusion from education (Clegg, 2007:78; Mohamed, 2013:188). Literacy and the choice of MoI are, in other words, key factors impacting on education, and in extension on society as whole, in many parts of the post-colonial world.

The practice of using an L2 as MoI creates a number of special challenges. For example, there is great variation in the prerequisites for learning the L2, depending on the pupils’ exposure to the MoI prior to starting school (see Hungi & Thuku, 2010, for example). Gender imbalances in education may also become more pronounced in L2 MoI contexts since many boys find it more challenging to learn a foreign language (e.g. Stoet & Geary 2013; OECD 2010). In addition, the quality of teaching may be affected. Not only do teachers in all subjects need to know the subject content, but they also need to be highly proficient in the MoI. They also need to have insight into how the L2 MoI affects students’ access to subject content, and have methods for overcoming potential difficulties. Essentially, every teacher has to be a literacy teacher (Draper, 2002: 357). Finally, choosing an L2 as MoI will also have an impact on the status of local languages and culture. Learning materials in the L2, especially at higher levels, are more often than not produced abroad and do not take local contexts into account.

With the above in mind, the aim of this paper is to propose a framework for investigating issues related to the medium of instruction and education in the Seychelles, where English is used as MoI from Primary 3 onwards. We hope to contribute to a knowledge-grounded base from which to pursue educational development. Since the situation in the Seychelles bears resemblances to many
other L2 MoI contexts, potential findings are highly relevant to other African and postcolonial countries which have adopted English as a MoI, and where literacy skills in the L2 are important for academic success.

1.1 The Seychelles context

The Seychelles has a lot in common with many African countries in the sub-Saharan region. It has a French and British colonial past with two colonial languages, French and English, occupying official positions. In schools, French was the MoI until the 1940s, when it was replaced by English (Fleischmann, 2008). Seychelles Creole (hereafter SC), the mother tongue for a large majority of Seychellois, was completely banned from schools until the 1980s (Fleischmann, 2008). However, after independence in 1976, SC became the third official language alongside the two colonial languages, and in 1981 it was introduced as MoI for the first four years of formal schooling.

Initially the introduction of SC in education was a success. Students after 1981, who were taught in SC during their first four years of education, outscored those who were previously only taught in English in almost every subject, including French and the sciences, and also performed equally well in English (Bickerton, 1990:48). In addition, literacy rates among 15-24 year olds went up from 57.3% in 1971 to 84.2% by 1987 (Camppling, Confiance & Purvis, 2011:51). According to Bollée (1993:88), the sole use of English as MoI prior to 1981 meant that teachers were “enseigner l’inconnu par l’inconnu” (teaching the unknown through the unknown).

The role of SC as MoI was, however, reduced to the first two years of primary education after reforms in 1996, when English became the sole MoI for most subjects other than French and SC from primary three onwards. The L1, SC, is only taught up to primary six. This is still the case today. Formally, however, the Seychelles has a trilingual policy where SC, English and French are given equal status.

2. Previous research from the region

The selected studies below address some of the key issues related to general literacy and the choice of MoI in education in the region. These include policy issues, the impact of L2 MoI on the learners and the effects on teaching. The role of the mother tongue in these educational contexts is also of interest.

2.1 Language-in-education policies and the curriculum

Language-in-education policies are influenced by a combination of pedagogical, economic and political factors (Prophet & Badege, 2006:240; Brok-Utne and Holmardsdottir, 2004:68; Laversuch, 2008:375). For the past fifty years, policy makers in postcolonial African countries have grappled with the ‘language question’ (Kamwangamalu, 2013:325). Issues include whether African nations should retain the colonial language(s) or replace them with indigenous languages or use both indigenous languages and ex-colonial languages as MoIs. These are clearly complex questions influenced by various factors, and which have great impact on the educational systems in the countries concerned.

Learning materials in the L2, especially at higher levels, are more often than not produced abroad and do not take local contexts into account.

According to Kamwangamalu (2013:325) policy makers grappling language-in-education issues have historically been informed by “conflicting ideologies including decolonization, development, internalization, [and] globalization”. On one side, there were those who felt that education should be available to all through the vernacular or mother tongue (UNESCO Model, 1953 and 1995; Hornberger, 2009; Hanna, 2011). On the other side there was the argument that the colonial languages should remain as MoIs because they guaranteed educational and economic success nationally and internationally (Dewey 2007; Ferguson 2009; Jenkins, 2006).

Some African countries chose to keep English as the sole MoI, while others combined it with the local languages, using the latter for the first few years of education and the former for the rest of the schooling years (Hamid, Nguyen & Kamwangamalu 2014:1). Few have chosen to pursue a path where local vernaculars play the dominant role as MoI throughout education. This balancing act between the role of the local languages and the L2 in education has by no means been an easy one, and according to Hamid et al., “there is evidence […] with regard to language practices in education in a number of polities in Africa, that English and French are promoted while local languages are disparaged even when they are promoted by national policies.” (2014:2). It has been widely argued (see Frey & Whitehead, 2009; Hornberger & Vaish 2009, and Hornberger, 2009, for example) that educational language policies (explicit or implicit) that promote dominant languages as the medium of instruction “jeopardize multicultural society, endanger democratic pluralism, and violate the rights of many children to have meaningful access to education in their mother tongue” (Hanna, 2011:734). “In effect, those sectors of the population who are most urgently in need of socio-economic advancement are reduced to silent objects of development who have no say regarding their future.” (Idris, Legère & Rosendal, 2007:34).

Ultimately, Clegg (2007:43) argues that L2 MoI contributes to “limiting the economic performance of a country” since it results in “low school achievement.”

On the other hand, there are many good reasons and valid arguments that explain the continued dominance of L2 MoI (primarily English) teaching in the region. Firstly as Schiffman (1996:22) points out, language policies “are cultural constructs, and are rooted in and evolve from historical elements of many kinds, some explicit and overt, some implicit and covert.” In other words, the systems of education that fostered the language policy makers were most likely based on colonial structures where English, for example, was the MoI. English is thus deeply associated with education and in extension, success. Secondly, there
is also the issue of globalization. English has rapidly become the lingua franca of international business and consequently, according to Hanna (2011:745), given the clear importance of English language acquisition as a means for gaining access to global competition, it seems reasonable to conclude that the promotion of English in schooling across the macro-spheres represents a sound rationale that positions the children of these countries for economic competitiveness.

The question, however, remains if the current language policies have the desired effect.

2.1.1 Language-in-education policies and the national curriculum of the Seychelles

The National Curriculum (Ministry of Education, 2013:18) states that the curriculum should enable students to “develop high levels of speaking, listening, reading and writing skills in Seychelles Creole, English and French, that are essential for further learning, work and life.” The general curriculum framework for languages further states that students should be able to develop ideas and communicate these effectively through all languages (SC, English and French) and there is a general emphasis on literacy (p.18). Communicating effectively in order to “make and express meaning” is also listed as an “essential competence” (p. 27). Further, according to the curriculum, any of “the three national languages can also be used as support languages in the teaching of particular subjects.” In reality, however, English holds a special position in education.

Seychellois students have to become fairly advanced English writers at an early age if they want to communicate their knowledge, and there is little acknowledgement of this challenge in the Curriculum Framework.

In the 2005 SAQMEC (Southern and Eastern African Consortium for Monitoring Educational Quality) report, the emphasis of “English as a key language in learning and teaching” is explained by that fact “that the overriding objective of the Ministry of Education is to deliver a curriculum that will produce flexible, adaptable students, whose education is up to international standard as part of the human resource development strategies of a small state” (Leste, Valentin & Hoareau, 2005:4). The language-in-education policies of the Seychelles have been strongly influenced by a combination of economic and political factors and Laversuch, (2008:379-80), lists various economic arguments for greater emphasis being put on English in the national curriculum. Some of these are 1) the Seychelles’s economy is reliant on other English speaking countries, 2) most educational textbooks are in English from English speaking countries, 3) there is a lack of grade-appropriate, standardized Creole-language teaching materials, 4) high proficiency level in English is seen as the main way of offering Seychellois graduates socioeconomic success, 5) the latter would benefit from greater employment opportunities and greater earning potentials and will eventually enjoy higher lateral and vertical professional mobility.

Clearly the Ministry of Education faces a challenging task in finding an acceptable balance between two seemingly contradictory intents. On the one hand it is advocating a trilingual language policy where all three languages have equal status, while on the other hand it is trying to meet the demands of globalization, where English is synonymous with unmatched advantages and status, especially in the educational context. Under current policies, the demands of the international market seem to be prioritized over demands of an equal trilingual policy, and a good understanding of English is a prerequisite for succeeding in education.

Further, the Curriculum Framework often are set and marked abroad (IGCSEs marked by Cambridge International). Since these examinations take place in English, advanced writing skills in the L2 are essential and a gatekeeper to educational success in all subjects. Mere reproduction and/or formulaic production in the L2 are obviously not enough to meet the goals of the curriculum (“express and make meaning”), or to meet the practical demands of communicating subject specific knowledge in writing. In reality Seychellois students have to become fairly advanced English writers at an early age if they want to communicate their knowledge, and there is little acknowledgement of this challenge in the Curriculum Framework.

2.2 A foreign MoI and its impact on learning

Much of the research that has been carried out in postcolonial African countries on the impact of a foreign MoI on the learners suggests that the current state of affairs may have a negative influence on the general literacy development of learners. Based on studies from South Africa, Janks (2011:29) argues that “the reader is so caught up in understanding the meaning of each new word, that he or she loses the thread of the sentence as a whole.” She continues to note that “children in the throes of a language/literacy switch cannot be expected to perform as well as children who are reading in their home language exclusively,” and that children in Grade Four were not ready for English as the MoI as “they simply did not have the vocabulary, language and literacy skills for...”
learning in English across the curriculum.” (Janks 2011:29). Similarly, in the case of Botswana, Prophet and Badeede, (2006) claim that “students who are not proficient in the language of instruction are hindered in their thinking skills, their exploratory skills and their explanatory skills.” They point out that the second language learner faces two major learning difficulties: “learning to use the language of instruction, commonly English, at the level required for learning academic content, and learning to use the language of science in order to decipher what is being said.” (Prophet & Badeede, 2006:239). Ultimately, they maintain that the cognitive development of a majority of students risks being stunted and their academic achievement hindered (Prophet & Badeede, 2006:241).

Overall, research indicates that literacy skills in the MoI impact on the general learning situation. Garrouste (2011), using hierarchical linear modeling of various factors impacting on scores in mathematics in secondary schools in Namibia, was able to show language proficiency to be one of the most important impact variables. Since there seems to be a general tendency for girls to outperform boys in language subjects (Stoet & Geary 2013; OECD, 2010), this indirectly means that girls are advantaged in other subjects too in contexts where foreign Mols are used. Such tendencies are not evident in countries where the L1 are used as MoI. In the 2009 PISA (Program for International Student Assessment) report, for example, girls significantly outscored boys in reading abilities, while boys tended to outscore the girls in the Sciences and especially in Mathematics (OECD, 2010:7). This is not the case in many African L2 Mol contexts (see Hungi & Thuki, 2010).

Literacy development in the L2 Mol has shown to be dependent on a number of factors. In an extensive study on variations in reading achievements across 14 Southern African school systems, which included the Seychelles, it was found that pupils who spoke the Mol at home more often were estimated to achieve better when compared with pupils who rarely or never spoke the Mol at home. This was found to be the case in all school systems investigated except in Lesotho (Hungi and Thuku, 2010:81). In this context it is important to note that the use of the Mol, such as English, in the home setting is related to socioeconomic factors; the well-educated middle classes are likely to use English, while the less privileged are less likely to do so. Further, Janks (2011) points to the importance of the orthographic systems of the mother tongue and the L2 in the literacy learning process. She makes the distinction between the generally phonemic African language orthographies and the non-phonemic English orthography, concluding that for a learner to move from literacy in a phonemic language to literacy in a non-phonemic language like English (or French) is “difficult and confusing.” This process is further complicated by English’s many vowel distinctions, which may be difficult to pronounce and hear, especially if the learner’s home language does not have these distinctions (Janks, 2011:29).

2.2.1 A foreign MOI and its impact on Seychellois learners

There has been limited research investigating L2 Mol effects on teaching, learning and examination in our schools to date. There are, however, indications that the Mol may be linked to problems in the education system: based on their SAQMEC study of English reading achievements in 14 African nations, for example, Hungi & Thuki (2010:63) conclude that Seychelles had among the greatest within-school inequity of the investigated nations. Since English is the Mol, this inequity is likely to impact on other subjects. A number of factors contribute this general indication of inequity.

For instance, Hungi & Thuki’s study shows that the Seychelles had one of the largest differences in reading scores between rich and poor pupils of the 14 nations investigated. These results may in turn be directly related to revealed differences in reading achievement between pupils who spoke English more frequently at home and those that rarely did so. Here, the Seychelles results displayed the greatest differences of all the nations in the study (Hungi & Thuki, 2010:81). In the same SAQMEC study, Hungi & Thuki, (2010:85) conclude that the Seychelles had the greatest gender differences in reading abilities of all the investigated nations and girls greatly outperformed boys. They link this result to possible cultural differences, especially in the roles that boys and girls as supposed to play within the school system. These findings correlate with results from the African Development Bank Report on Seychelles (African Development Bank, 2009:8), which show that girls outperformed boys in all subjects across the curriculum in the national primary and secondary exams from 2000-2008, with a mean difference of more than 10 per cent. This may be also directly related to the L2 Mol since, as mentioned above, it is generally acknowledged that boys have a harder time learning languages. Gender and social class related differences in Mol proficiency will have an immediate impact on students’ overall performance since limited knowledge of English means limited access to the teaching and learning materials in all the other subjects. In

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Table 1: Percentage Mean Scores in Primary 6 by Subject for the Past Eight Years
other words, the current system risks unintentionally preserving and even accentuating structural inequities. The wish to provide exclusive international education inadvertently excludes large parts of the population.

A closer examination of recent reports from the primary six national exams from 2009 to 2013 confirms the above trends. Girls are still outperforming boys in all the subjects, especially in the three national languages and Mathematics, where the mean difference is still above ten per cent. This gender distribution diverges from the findings of the OECD Program for International Student Assessment (PISA), where the boys tend to outperform girls in Mathematics (OECD, 2010:7). The results from reports indeed suggest that the general level of proficiency in English is problematic. In 2012, the national mean for English stood at 39.7 per cent, which showed a significant drop from the previous year’s results. Approximately 16 per cent of the candidates were ungraded. 2013’s results were equally alarming and girls in Mathematics (OECD, 2010:7) show similar decreases, raising the issue further as to whether or not it is the L2 Mol situation that may be partly to blame. The comparatively poor results in English compared to the other two national languages in the national exams since 2006 are clearly of concern (see Table 1).

With specific reference to writing, the National 2012 Primary Six Exam Report (Ministry of Education, 2012) describes this component as an exercise that continues to present the greatest challenge for many candidates. In 2013, the situation did not improve much. According to the examination report the results for both the English Reading and Writing papers “do not look good” (Ministry of Education, 2013:17).

Given the particularly alarming results in the writing papers both at P6 and S5 levels, this aspect of literacy is of particular interest when investigating L2 Mol issues in the Seychelles. Over the past eight years in the writing component. The report points to a close relationship between the children’s performance in reading and writing, and concludes that “if there is no reading taking place in a pupil’s studious life then it is hard to imagine how that pupil can perform to expected standard in his/her writing at all, and in all three languages” (Ministry of Education, 2013:17).

The problems identified in the national primary exams seem to persist in the system onto secondary levels. The 2013 Secondary Five National Examination Report (Ministry of Education, 2014) reveals poor performance in English and especially in writing at a crucial period in their educational pathway that decides what kind of institutions or work places that the students will eventually be associated with. For their writing exams the students had to write a short composition in English of 120 to 150 words choosing from descriptive, narrative or argumentative topics. Only 1 candidate out of 181 scored 8 out of 10 for the composition. Alarmingly more than 50 per cent of the candidates did not score any mark for content and only 12 per cent of the candidates managed to score satisfactory marks this component of the composition. According to the report, only 8 per cent had a good command of the language, and the majority of compositions were marred by mistakes such as spelling, inappropriate expressions, improper use of tenses and syntax. There were even instances where the mother tongue was used, an interesting phenomenon in multilingual contexts have to master several professional roles: pedagogue, linguist, intercultural communicator, and a multilingual speaker (Benson 2010:209). They “must navigate unique pedagogical, social and cultural situations” (Kibler & Roman 2013:188). Clearly this is tall order, especially in Sub-Saharan African contexts where there are great shortages of physical and human resources.

Many authors accentuate the absence of necessary support from educational bodies causing unplanned and unsupported bilingual education without any theoretical basis in many parts of Africa. Clegg & Afitska (2011:61), for example, point to the relative absence in teacher training “of the specialist pedagogy which learners with low ability in the medium of instruction require,” while other researchers emphasize the absence of in-service training resulting in a lack of professional development (Kibler & Roman 2013:188; Benson, 2010). Instead, they rely heavily on their personal knowledge, beliefs and previous experiences (Kibler & Roman 2013:190), which, if not founded on sound pedagogical and theoretical grounds,
simply may involve the transmission of past errors to their learners.

Unclear and changeable policies regarding MoI also cause challenges for teachers. Many African nations have adopted models whereby the L1 is the MoI during the first two or three years of education but its role after this is often less clear-cut. Policies also tend to change rapidly depending on the political climate. In the Seychelles, for example, the role of Seychelles Creole in education was strengthened up until 1996 after which it has gradually weakened (Fleischmann 2008). On the whole, there is also evidence that there is certain official resistance to bi/multilingual education in many parts of Africa, even to the extent that it is formally condemned by some authorities, who still advocate submersion-type teaching in which the L2 MoI is the sole accepted medium of communication (Clegg & Afitksa, 2011:61). In the absence of clear policies and lack of directives as to how they should be implemented, “teachers in Africa tend to generate their own creative bilingual practices” according to Clegg and Afitksa (2011:61). Great variation in the implementation of language policies have been reported from classrooms in the Maldives (Mohamed, 2013), Kenya and Nigeria (Abd-Kadir & Hardman 2007), Tanzania (Mwinesheikhe 2008), and Zanzibar (Clegg & Afitksa 2011), and strategies range from pure L2 teaching to frequent code mixing and code switching.

The range of observed MoI strategies may not always be motivated by student needs. To most teachers, the MoI is a second or even third language and thus their linguistic reservoir may be shallow (Prophet & Badede 2006:238). In his study of the Maldives, Mohamed (2013:198) found that the majority of investigated teachers did not teach in the language they were most comfortable with; most of the teachers’ had superior reading writing and oral skills in their L1 compared to English (L2), and there were frequent observations of teacher language errors in spoken and written English. Mohamed (2013:198) speculates that inadequate language skills may have contributed to a greater teacher focus on the end product rather than the actual learning process. Strategies to hide and overcome language shortcomings may include learning and using long stretches of pre-rehearsed talk (Clegg & Afitksa 2011:63), as well as adopting patterns of translating sentences into the L1 (Brock-Utne and Holmardsdottir 2003). Overall, limited language skills may well result in less flexible teaching.

In their study of teaching and learning in more than two languages in African classrooms (Clegg & Afitksa, 2011), the authors concluded that L2 MoI contexts were characterized by teacher-led plenary talk, where the teacher does all the talking and pupils simply take notes or copy text from the blackboard; so-called IRF-talk, characterized by long teacher initiation turns, followed by short student responses after which teachers give long feedback, and safetalk, characterized by single word or short phrase chorus responses (Chick, 1996). In all of these forms of teacher-talk, the main output focus is on the teacher, while the cognitive and linguistic demands on the learners are reduced to a minimum. Typically teachers use low-challenge questions where the students can respond briefly without having to think too much about how and what to respond. In contrast, the authors found that so-called exploratory talk, often less formal and more dialogic in nature, is relatively rare. Clegg & Afitksa speculate that limited L2 proficiency among the learners may be one key factor leading to this state of affairs, and since L1 usage, in many cases a prerequisite for fruitful exploratory talk, is “frowned upon” (2011:70) this option is not used.

2.3.1 English MoI and its Impact on teaching in the Seychelles

Seychellois teachers, especially those at primary level, face a mammoth task of delivering in a multilingual context. Almost all of them are second language speakers of the MoI, with a limited number having received their training in an English speaking country like England or Australia. The SACMEQ research from 2005 (Leste et al., 2005) shows that there were relatively few graduate teachers in primary schools. Only 6.3 per cent of the pupils benefitted from an English teacher who had graduate degree qualifications and there were several regions where there were no graduate English teachers at all (Leste et al. 2005:151). Although things have improved slightly in recent years, this state of affairs is particularly alarming given that teachers are expected to play the role of pedagogue, linguist, intercultural communicator, and a multilingual speaker, clearly very qualified work.

Moumou’s (2004) study of critical literacy in the Seychelles classroom arguably, gives an indication that the teaching skills of language teachers is an area that needs special attention. According to Moumou (2004:47) text analysis in the English classrooms generally centers on a very controlled teacher initiation-student response-evaluation procedure, similar to the IRF pattern discussed in section 2.3. Students’ responses were limited to mere factual reproduction and they were not encouraged to apply higher order language skills such as evaluating, discussion and critical analysis. Our own classroom observations (Deutschmann forthcoming) supports Moumou’s findings.
Exploratory talk was virtually absent in primary school teaching, where there was a clear teacher focus with long stretches of plenary talk, IRF patterns and several examples of safe talk. Code switching, i.e. the use of SC as a support language in teaching at primary level, was also very rare.

2.4 Alternative models of integrating foreign Mols in teaching

The traditional transition model, where the mother tongue is replaced quite abruptly as Mol and is then totally excluded from the educational context, has been widely challenged (see Benson 2010). Siegel (2005:149) argues that this practice downgrades the importance of literacy in the first language, which merely becomes “a means of acquiring literacy in the European official language(s)”. Various models for approaching challenges regarding Mol in education have been suggested.

Hungi & Thuku (2010:92), in their study of reading achievements in 14 African nations, propose models that comprise involving parents and older siblings to increase exposure to the L2. At the same time they recognize an inherent conflict in the model since “the schools are expected to maintain pupils’ interest in other national languages” (Hungi & Thuku 2010:91). On a more general level, they also propose “special home intervention projects […] whereby the teachers are trained how to change the parental and older siblings behaviors in the home so that the children receive more encouragement and support for studying.” (92).

Other researchers have proposed that a less monolingual approaches to Mol may be a way forward to improve the learning situation. In the case of Mauritius, Sauzier-Uchida (2009) has shown that when the Mol was a mixture of English, French and Creole, all of the respondents were satisfied, owing to the fact that they understood the subjects better using all their linguistic resources at hand. This model also meant that teachers could choose the language they were most fluent in, which will have made their teaching more efficient (Sauzier-Uchida 2009:116). Benson (2010:215) advocates a move away from the “one teacher–one classroom model”, and proposes coordination between subject teachers and language teachers in so-called team teaching. An example given is the work teams (arbetslag) as used in Sweden, for example, where subject teachers, mother-tongue teachers and second-language teachers coordinate their efforts to teach theme-based units, where each teacher provides part of the knowledge and skills base (Baker, 2001). The use of classroom language aides and pair teaching are other alternatives. This would allow students to identify certain teachers with certain languages, and make maximum use of their various competences.

Prophet and Bedede (2006:237) propose a so-called “maintenance model” in which the child’s first language is used initially for instruction, where the L2 is then added gradually as the medium of instruction parallel to the first language, and where both languages serve as instructional tools throughout education. This provides an alternative to the transition model, where the mother tongue is replaced quite abruptly as Mol, and is then totally excluded from the educational context.

Some models have suggested a more content related approach to literacy. Draper (2002:382), for example, proposes cross-disciplinary projects that seek to consider content-specific literacy issues related to the differences in discourses, texts, language, and so forth across subject areas. Prophet & Bedede (2006) argue that the language in tests in subjects such as mathematics and science should be adapted to learners’ proficiency levels, and claim that “simplifying various linguistic factors in questions does improve performance, sometimes quite significantly” (Prophet & Bedede 2006:248).

Overall, many researchers call for a pedagogy which more “closely calibrated to the conditions in African classrooms” (Clegg & Afitska 2011:74), where the emphasis lies in preparing teachers to support their learners working in two or more languages. Since language is an integral part of teaching in all subjects in this context, Benson (2010:215-216) proposes an effective bilingual teacher training, which includes multilingualism, interculturalism, biliteracy and “a strong foundation in theories and methodologies of language development (L1, L2, and beyond)” (216).

3. A framework for investigating L2 Mol contexts

Based on the empirical evidence presented in Section 2 above, we propose a framework for more systematic queries into L2 Mol issues, which focuses on what we perceive to be key issues of concern.
3.1 Theoretical base

The proposed framework takes a general sociocultural approach to L2 Mol in education. According to Vygotsky’s view, “learning and development are socially and culturally situated,” and “are mediated by language and other symbols, and can be best understood in the context of their historical development” (Davidson 2010:249). Sociocultural approaches to learning and literacy have long played an important role in the literacy field (Perry 2012:51). These include the Social Practice (Street, 1985) approach to literacy, which is of particular interest to this framework. The approach goes beyond autonomous models of literacy that conceptualize it in strictly technical and cognitive terms. Davidson (2010:246) argues that “such a narrow cognitive perspective of literacy development risks perpetuating social inequalities that stem from social and cultural diversity.” In contrast, the Social Practice model connects to how literacy is understood in the context of their historical development. According to the model, the role of the L1 in the classroom, the school environment and more general societal aspects (see Figure 2).

3.2 The framework

As evident from the previous sections, L2 Mol questions are complex. There are a number of issues ranging from policy questions, student profiles, teacher attitudes and teaching strategies as well as societal issues and attitudes that combine in defining the language-in-education situation. Since all of these are interrelated the proposed framework takes a holistic approach where several factors are taken into consideration. These include curriculum and policy issues, learner aspects, teaching strategies, the role of the L1 in the classroom, the school environment and more general societal aspects (see Figure 2).

3.2.1 Curriculum and policy issues

A key area of query here is to what extent the curriculum and policy documents take the role of the of language instruction as a vehicle for learning into account when describing learning goals etc. Specific lines of queries include:

- Do the specific learning goals in English at different stages of schooling match the level needed to access and communicate knowledge in other subject areas?
- Given that students are expected to communicate their knowledge in writing, is there specific attention paid to this area of literacy in the learning goals?

Another area of interest is the role of the mother tongue in teaching and learning. Key questions include:

References

Deutschmann, M. (forthcoming). In English please! – Teacher Talk and Code Switching in Primary and Secondary Schools in the Seychelles (manuscript not yet established).
• To what extent does the curriculum acknowledge SC as the L1 and its role in general literacy?
• To what extent does the curriculum framework include guidelines for the use of SC as supportive language in post-Primary 2 teaching?

It is our belief, that such guidelines are necessary in order for teachers to feel confident to use Creole in the classroom, given that there generally seem to be negative attitudes towards its role in education among teachers (see Fleischmann 2008).

3.2.2 Learner issues

It is clear from previous studies (Hungi & Thuki, 2010; Leste et al. 2005; African Development bank, 2009) that different groups of learners have very different prerequisites in relation to the L2 MoI. Specific questions here include:
• How do the prerequisites for different students differ depending on family background?
• How does the system support these groups and boys’ learning in particular?
• What gaps can be identified between actual knowledge and the ability to communicate this knowledge in English (especially in writing)?
• To what extent does the current system take the individual learning needs of children into account?
• How can we support learners so that they can reach their full learning potential, and so that the medium of instruction does not become a barrier to learning?

3.2.3 Teaching issues

As highlighted in the previous sections, teaching in a foreign language is complex and requires special training and skills. Specific questions include:
• How well prepared are teachers to teach writing in an L2?
• Are they themselves fully proficient in English?
• Are they aware of special issues and methods related to bi/trilingual teaching?
• To what extent are they trained in different types of teacher-talk and do they use the L1 to its full potential to support their students?

3.2.4 The role of the L1 in teaching

The potential role of the L1 in the learning situation should arguably be further explored. As discussed above, given that Seychellois students are first taught to read and write in Creole, the L1 language skills have an enormous impact on general literacy. There are many alternative models to the current transition model (where the L1 is replaced abruptly after Primary 2) that could be explored. Note that these models do not exclude the use of English as medium of instruction, but instead place learning itself, rather than the language in which this takes place, at the center of any classroom activity. There is great scope for Action Research in this area of inquiry.

3.2.5 The school environment

Queries into how the school environment affects the L2 MoI instruction situation most obviously refer to infrastructural questions, such as the availability of learning materials, ICT, language labs etc. Equally important is the professional culture, informal rules and codes that may affect the language situation. What are the attitudes towards multilingual teaching, for example? Is there any systematic communication and collaboration between language teachers and subject teachers so that students’ potential language problems can be identified and dealt with?

3.2.6 Out-of-school factors

The exposure to English outside the school context is of great interest. Television, Internet and various social media are obvious factors that will contribute to extramural learning. In addition, tourism is a part of every-day life in the Seychelles and there is plenty of opportunity for face-to-face meetings where English is used as a lingua franca. Are these potentials fully exploited by the schools?

3.2.7 Societal issues

The status of the various languages in question in society in general will have a decisive impact on attitudes towards their use in teaching. Similarly, language-in-education policies will also affect attitudes of languages in society. Bossong (1980) presents two models, the ‘recessive’ and the ‘expansive’ cycles, which can be the ultimate outcome of different language policies. On the one hand, lack of promotion of a local language in education, the sciences, finance etc. gives fuel to those that claim that the language is unfit for formal purposes, thereby further diminishing its role, motivating added restrictions to the domains where it is used, ultimately, leaving it in a very weak position, at worst as an oral vernacular. On the other hand, language policies that recognise a local language’s role in education, the media, science etc. and fuel efforts to promote its use in official contexts will raise its status, leading to further motivation for expanding its role etc. According to Bossong, active use of a language in all domains, including education, the media, science and technology, is a prerequisite for its long-term survival and growth.

Unfortunately, there is evidence that local languages in many parts of Africa are experiencing recessive cycle development. In their study of four African nations, Idris et al. (2007) conclude that L1s share similar low status, being confined to very limited public domains such as lower primary education, religion and oral media. The same seems to be true for the Seychelles, where there is evidence that SC is generally seen as a low status language inappropriate for public, official contexts, and where English is associated with status and prestige. Choppy (2002:17), for example, points out that SC has yet to find its role in government administration, a result of colonial tradition, and Mahoune (2000:n.p) points to the fact that while most Seychellois are proud of their mother tongue “they will subconsciously associate development with French and English.” Particular noteworthy in this context is that teachers seem to be particularly negative towards its promotion in education (Fleischman 2008:130). It is obviously important to be aware of such attitudes before embarking on any language-in-education reforms.
4. Summary and conclusions

Evidence from various nations in the region, as well as the Seychelles itself, shows that current L2 MoI practice is a likely contributor to observed inequity in education and may also have a direct negative impact on the quality of education. There are several factors that have to be the considered when exploring this complex language-in-education formula. These include the policy document that steer the systems as well as how these policies are translated into daily practice; the students and their prerequisites for accessing the language of instruction, but also their ability to communicate their knowledge through this language; the teacher situation and how teachers are supported to cope with the complexities of multilingual teaching, and last but not least the general attitudes towards the languages in question that prevail in society as a whole.

There are no easy answers as how to solve problems related to MoI in the region. Totally abandoning former colonial languages such as English in education is not an option in the era of globalization, but we also need to recognize that current systems, which do not recognize the potential value of the use of local mother tongues in the class room are not working for large parts of the population – the learning potential of the population is simply not being realized. While we recognize that there are no easy answers, it is perhaps time to look at empirical evidence and to start asking the right questions; an informed framework for approaching the "language question" is thus well motivated. We hope that this will be a valuable contribution.

References


No partnership is too small to count

In the context of SIDS, all partnerships that contribute to the group’s sustainable development have value.

Partnerships do not have to be multimillion-dollar projects that include all SIDS. They can be a partnership with one of the SIDS’ region (AIMS, Caribbean, Pacific), SIDS communities with identical challenges, a specific sector, a village, a women or youth group or even a school.

The measure of success of these partnerships need not be the level of financial resources pledged or the number of partnerships launched, but rather their overall quality. These include partnerships being implemented now, those that are sustainable in the long run and can be replicated elsewhere, partnerships that will enhance the resilience of SIDS to the unique challenges they confront and that contribute positively to the improvement of the lives of their populations.

Not all partnerships need be through financial/monetary resources. Technical assistance through capacity building, knowledge and idea exchange, transfer of appropriate, proven and affordable technologies are just as valuable.

Sustainability of partnerships

Partnerships should have clear targets, outputs, planned outcomes and timelines. All stakeholders in a partnership should ensure commitment to the partnerships, with a clear delineation of responsibilities to ensure accountability.

It is important to share lessons learned so that successes are captured and used again while failures are minimized and not repeated. To this end we are not starting from scratch, and best practices from existing partnerships will be used to shape the 2014 launching pad.

A clear follow-up/monitoring and reporting process for all partnerships launched in the 2014 International conference in Samoa must be clarified, including which specific agency will undertake which task at the national, regional or international level. A clear accountability process at all levels gives SIDS and their partners the ability to monitor and report on the partnerships launched, while leaving the detailed responsibility mechanisms to each respective level. This ensures only genuine partnerships that will be implemented are registered to avoid having a long registry of empty pledges.

Partnerships in the context of conference outcomes

Partnerships are an effective means/process to instigate and maintain momentum for collective implementation and accountability. Priority issues and areas for such implementation remain a critical outcome of the 2014 SIDS Conference and will be determined by the Political outcome document. This will no doubt build on the lessons learnt over the last 20 years of focused sustainable development efforts committed through the Rio, Barbados and Mauritius conference outcomes. It must be forward looking but pragmatic and consider the implications of global trends in development and crisis.

SID to lead the charge

SID members should take the lead in identifying where they can benefit from partnerships in terms of their sustainable development.

It is hoped that they will decide to take up the overarching theme “SIDS Sustainable Development through genuine and durable partnerships” by developing it during the preparatory process of the Conference at the national, regional and inter-regional levels.

Focus on partnerships will vary between SIDS and from SIDS region to region. In Samoa’s case, it has decided to prioritize its partnerships vis-à-vis:

- Climate change (adaptation and mitigation);
- Oceans and forests;
- Enhancing SIDS resilience;
- Disaster risk reduction;
- Renewable Energy;
- Post-LDC graduation.

It’s a global conference, not a SIDS conference on SIDS. Samoa strongly supports the call for a concise, focused, and action oriented Conference Outcome document. We consider it will be strongest if developed and led by SIDS and supported by the wider international and UN community.

We recognize that while the conference will focus on SIDS issues (most of which have worldwide impacts/consequences, e.g. climate change, ocean management, energy security, etc.), the conference is not a conference of SIDS for SIDS only. It seeks to bring the full international community together, in the spirit of genuine and durable partnerships. It seeks to say – How can we work collaboratively as partners to address the special needs and circumstances of SIDS and thereby ensure their sustainable development!