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# Strengthening agriculture-tourism linkages in the developing World: Opportunities, barriers and current initiatives

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**Building linkages between agriculture and tourism is critical for maximising tourism's economic impacts in developing countries. The objective in this article is to provide a critical review of existing scholarship relating to linkages between tourism and agriculture as a whole, to explanations concerning the barriers to strengthened linkages, and of initiatives for encouraging closer agriculture-tourism linkages in the developing world. It is argued that key policy issues for strengthened linkages relate to a set of supply, demand and marketing related issues, which are core barriers to linking tourism establishments and agricultural food producers.**

**Key words:** Linkages, tourism, agriculture, developing world, sustainable tourism.

## INTRODUCTION

Arguably, the successful broadening and deepening of local linkages is an integral part of "making tourism work for economic diversification" (Lejarraja and Walkenhorst, 2007). More broadly Ashley and Haysom (2009) assert that the opening up of "opportunities for emerging entrepreneurs to access corporate supply chains is one of the most useful ways in which mainstream business can contribute to local development". Indeed, without inter-sectoral collaboration and fomenting sustainable linkages between tourism demand and other sectors in the destination economy, tourism will fail as a trigger for local entrepreneurship (Lacher and Nepal, 2010a, 2010b; Kausar et al., 2011). Mitchell and Ashley (2010) identify different 'pathways' to study the benefits the poor can obtain from tourism. One of these pathways is 'indirect benefit flows' to the poor through induced impacts which exist through tourism supply chains. According to Mitchell and Ashley (2010) the scope for policy and intervention to boost procurement of local supplies can be considerable. The income earned from such supply chains is described by Ashley and Haysom (2008) as 'pro-poor flows' as tourism linkages are able to incorporate the poor. In addition, both Meyer (2007) and Janis (2011) emphasize that supply chains represent an important and increasingly studied avenue for reducing poverty through

tourism.

Harnessing the massive potential of tourism has become a focus of economic development planning in both developed and developing countries where there is growing recognition of the potential for creating synergistic relationships between tourism and agriculture (Rueegg, 2009; Torres and Momsen, 2011). The nexus of tourism and agriculture has been substantially explored in research which has been conducted in developed countries and includes, for example, issues of fostering the potential for gastronomic tourism and encouraging direct sales of farm products to tourists (Hermans, 1981; Brown et al., 1991; Cox et al., 1994; Telfer, 2000; Fleischer and Tchetchik, 2005; Knowd, 2006; Skuras et al., 2006; Dougherty and Green, 2011; Francesconi and Stein, 2011). In the context of the developing world debates on agriculture-tourism linkages are more recent, not least because of the later arrival of developing countries into the global tourism economy. With the expansion of tourism-led development in many parts of Africa, Asia and Latin America, however, many agricultural economists, tourism scholars and development planners are examining mechanisms to maximise tourism impacts for destination national and local economies.

It has been observed that fomenting 'responsible linkages' between agriculture and tourism offers much promise for development intervention in the global South, not least because a major segment of their production and communities is inextricably linked to agriculture (Asiedu and Gbedema, 2011). For Meyer (2007) sourcing local agricultural products is one of the key benefits that the tourism sector can offer in the developing world. From an African perspective Asiedu and Gbedema (2011) aver that "agriculture is able to integrate with tourism to generate increased growth and development in rural settings and poorer and marginalized sections of the society through pro-poor policy interventions". Finally, a symbiotic linkage between tourism and agriculture is a cornerstone for promoting local economic development in Africa (Rogerson and Rogerson, 2010).

The objective in this paper is to furnish the findings from a critical analysis which has been undertaken of existing international debates and scholarship relating to linkages between tourism and agriculture as a whole, to explanations concerning the barriers to strengthened linkages, and of initiatives for developing closer agriculture-tourism linkages in the developing world. In synthesizing and critically reviewing material from a range of different investigations the analysis represents a response to the call made for additional "comparative research" to better interpret the links between tourism and agriculture (Telfer and Wall, 2000). The article is structured in terms of three uneven sections of discussion. The first section provides a brief discussion of methods and sources. The results and discussion section represents section two. This furnishes an overview of broad relationships between agriculture and tourism and examines the barriers to the formation and development of linkages between the tourism and agriculture sectors in the context of the developing world. The third concluding section addresses the policy importance of strengthened agriculture-tourism linkages and highlights the urgency of further research on this topic.

## MATERIALS AND METHODS

This paper is a critical literature review and thus is based on secondary sources. An international scan of material was undertaken with a specific focus on issues relating to the Global South or developing world. Material sourced included data which was analysed on agriculture-tourism linkages in a range of different regions, most importantly the Caribbean, Mexico, Indonesia, Kenya, Sierra Leone and Southern Africa. The source material used in this investigation includes published material, unpublished dissertations as well as a range of 'grey' literature in terms of reports to a number of international agencies relating to and interrogating the question of agriculture-tourism linkages.

## RESULTS AND DISCUSSION

The results of this critical analysis of international

scholarship on agriculture-tourism linkages are organised and discussed under the following two thematic headings of analysis: Linking tourism and agriculture; and barriers to linkage.

The conclusion builds upon the findings to review critically how linkages might be further strengthened between agriculture and tourism in the countries of the global south.

### Linking tourism and agriculture

The macro-relationship between tourism and agriculture in the developing world is considered as multi-faceted, complex and variable (Torres and Momsen, 2011). Historically, Latimer (1985) points out that during the 1960s and 1970s many scholars contended that tourism had a poor social return as it was claimed tourism was destroying other sectors, especially agriculture, by competing for land and labour. More recent assessments on agriculture-tourism relationships offer different opinions. These range across a spectrum from situations of "conflict where tourism competes with agriculture for land, water and labour to symbiosis where the tourism industry purchases local agricultural products and uses the agricultural landscape for agritourism" (Telfer and Wall, 2000). Critically, tourism offers a potential to galvanize local agricultural development through backward linkages that allow local farmers to supply the food needs of tourism establishments (Torres and Momsen, 2004). Accordingly, strengthening the linkages between agriculture and tourism is central to promoting symbiosis rather than conflict between the two sectors (Rueegg, 2009). The benefits of a closer relationship include decreased linkages through imports, improvement in tourism industry food supplies, and increased tourist access to local foods and improved sustainability for tourism, not least through alleviation of poverty (Torres and Momsen, 2011). Recent scholarship considers the involvement of small producers in tourism supply chains as part of what is described as emerging "inclusive business" models which incorporate local communities and the poor (Vorley and Proctor, 2008; Oxfam International, 2010).

Scholarship on pro-poor tourism points to several reasons why local farmers in developing countries should be supplying tourism enterprises with food products (Torres and Momsen, 2004; Meyer, 2006; Konig, 2007). In many developing countries, tourism projects have been initiated in regions or localities where the livelihoods of the poor are dominated by food production. It is emphasized, therefore, that supplying formal tourism establishments with food products can build upon the existing skills of the poor without changing their livelihood strategies (Torres and Momsen, 2004). Moreover, the provision of food products involves utilizing the productive assets of the poor in terms of land and labour. New skills

learned in the production of food for tourism establishments potentially also might allow farmers to transfer such skills to other food supply chains.

Finally, pro-poor tourism proponents suggest an untapped potential exists for poor people to furnish 'authentic' locally produced food for which there is a growing demand (Meyer, 2007). As food and beverages can account for approximately one-third of tourist expenditure, the promotion of local food production for tourism consumption thus may affect significantly the economic and social impact of tourism (Mak et al., 2011). Accordingly, in terms of attaining the objectives set by pro-poor tourism, the supply chain to tourism enterprises is especially significant because it can disperse the benefits of tourism spatially well beyond that of the destination. According to Torres (2003) the failure to stimulate tourism-agriculture supply linkages represents "both a lost opportunity for local agriculture and a haemorrhaging of tourism benefits". Numerous authors highlight that reinforcing linkages between agriculture and tourism represents a critical vehicle for extending the local economic development impacts from tourism projects and correspondingly for promoting the goals of pro-poor tourism (Telfer and Wall, 2000; Torres and Momsen, 2004; Meyer, 2006; Torres and Momsen, 2011). Indeed, it is considered the agricultural sector offers "promising good opportunities" for nurturing linkages between the accommodation sector and poor neighbouring communities (Meyer, 2007) with the supply of fresh vegetable produce offering the greatest potential for local linkage (Tourism Global Inc, 2006). In several parts of the developing world hotels, safari lodges and all inclusive resorts are encouraged to reduce long-distance food sourcing in favour of procuring a greater share of locally available agricultural produce, including even a diversification of the supply chain to include local foods. One compelling argument for strengthening local tourism-agriculture linkages relates to its impacts for reducing the 'carbon footprint' of tourism establishments (Gosling et al., 2011). In so doing, expanded linkages between agriculture and tourism can contribute "to the ethos of sustainable tourism" (Berno, 2011).

### Barriers to linkages

Despite the several acknowledged benefits from localizing food production and stronger tourism-agriculture linkages, recent international research shows the continued strength of imported foods in high-end tourism accommodation establishments in many developing countries (Berno, 2011). Although there is widespread agreement that increased demands from tourism should be met by local agricultural supplies, as observed by Timms and Neill (2011), "the empirical results of achieving these benefits, for the most part, have been less than stellar".

Several critical barriers are isolated that constrain involvement of local producers in tourism supply chains (Torres and Momsen, 2011). In pioneer work undertaken during the 1980s in the Caribbean Belisle (1983) offers several demand and supply-related reasons why hotels do not use a greater proportion of local food: "(a) tourists prefer the type and taste of food consumed in their home countries; (b) imported food is cheaper than local food; (c) hotels accept an opportunity cost to ensure supplier quality and/or regularity of food supply; (d) deficient quality of local food (particularly hygienic quality); (e) hotel entrepreneurs are not fully aware of the type and quantity of locally available food; (f) local farmers do not want to change their traditional crop production; (g) farmers lack information on the types and quantities of food needed by hotels; (h) farmers are inhibited from dealing with hotels or vice-versa; and (j) farmers or intermediaries are unreliable in terms of regularity of supply or fulfilling other contract agreements".

The relevance of these issues remain little changed as judged from the findings of Caribbean researchers nearly 30 years later (Brown, 2003; Kelly, 2008; Reid, 2009; Rhiney, 2011a, 2011b; Richardson-Ngwenya and Momsen, 2011; Timms and Neill, 2011). Rhiney (2011a) summarises the key problems of the Jamaican agricultural industry as "the domestic farming sector's inability to guarantee sufficient supplies of high quality, competitively priced agricultural produce on a consistent basis". From the tourism sector the challenge for linkage appears "the lack of communication between industry representatives and local farmers, particular hotels' high food supply quota and quality requirements and a preference by certain types of hotels to source cheaper price imports over local food provisions" (Rhiney, 2011a). Timms (2006) accounts for limited linkages between tourism and agriculture in St Lucia mainly as a consequence of "the high cost and variable quality of local produce" as well as "poor production planning and extreme seasonality of agricultural product availability". The imperative for quality products is stressed by the finding that almost half of hotels in Trinidad and Tobago can purchase only certified agricultural products (Harry, no date).

Improper planning is highlighted as an issue by Brown (2003) in terms of "over production" at times of certain vegetables and of "inconsistency" of small farm suppliers. Other significant issues centre upon weaknesses in the agro-tourism value chain, most importantly the existence of fragmented and inefficient distribution systems, inadequate storage, and low levels of adoption of standards or formal quality procedures (Reid, 2009). Further barriers relate to inadequate infrastructure, poorly articulated food marketing and production systems, and lack of farmers' access to credit, technology and markets often as a result of an exclusive focus of the state and local capitalist interests on export production (Reid, 2009; Rhiney, 2011a). Recent Caribbean research from St Kitts

points to organisational issues in farming as larger hotels will not “deal with individual farmers as this presents them with logistical problems” (Kelly, 2008) and that in order to capture market opportunities “farmers would have to demonstrate the capability to consistently supply competitively priced high quality fresh produce in required volumes” (Kelly, 2008). Finally, the point is re-iterated from the experience of Trinidad and Tobago that local farmers have little information about the quantity of agricultural products which are required by hotels and of the detailed terms and conditions under which large hotels would be willing to purchase local agricultural commodities (Harry, no date). One added recent challenge to nurturing linkages between tourism and agriculture relates ironically to the effect of ‘new consumerism’ as rising consumer demands for fair trade and organic food products cannot readily be sourced from Caribbean producers (Richardson-Ngwenya and Momsen, 2011).

Across the Caribbean, Belisle (1983) drew attention to the effect of “the employment of non-nationals in skilled and professional positions” within the tourism sector. It is evident, however, that whilst the proportion of expatriates in food and beverage decision-making positions formerly was quite large, subsequently it has decreased to a point that only the higher-category hotels employ foreign chefs. Nevertheless, the expansion of local chefs in food decision-making positions has not always shifted the patterns of food supply purchasing because many of these local chefs trained in North America where they became accustomed to using frozen, canned or dried, or otherwise processed foods due to their convenience (and sometimes cheapness) as compared to fresh foodstuffs. Timms and Neill (2011) point out that chefs (particularly in high-end accommodation establishments) often also have concerns about health considerations and food safety quality standards surrounding locally sourced products irrespective of whether these concerns are grounded in hard evidence. For Belisle (1983), the origin and training of the key personnel who make decisions on menus and food purchases constitutes a critical determinant of the high level of food imports into Caribbean tourism establishments.

Torres (2002) asserts the driving force behind hotel food procurement is tourist food consumption and preferences and that instead of attempting to shift tourist consumption patterns towards local foods and cuisine, the industry largely reacts to existing patterns of tourist food demand. A particular constraint relates to the nature of tourist food demands in the Caribbean, which is dominated by North American tourists renowned for their established and conservative food preferences (Belisle, 1983). An analysis and understanding of consumption patterns is considered critical because tourist tastes and preferences “are the primary determinants of both the constraints to, and potential for, creating linkages to local production” (Torres, 2002). It is generally considered that

tourists who visit mass ‘sun, sea and sand’ resorts will be more conservative in their consumption patterns as compared to the more adventurous tastes of post-Fordist tourists who may display a stronger interest in trying local foods (Telfer and Wall, 2000). The emergence of new post-Fordist alternatives to Fordist mass tourism, such as backpacking or ecotourism, opens new opportunities to introduce tourists to local cuisine based on domestic produce, and thereby to strengthen the linkages between tourism and agriculture (Torres and Momsen, 2011).

In research conducted at Cancun it was disclosed the manner in which resorts or destinations are planned can have significant implications for the ways in which linkages between different sectors are forged (Torres, 2003). It was suggested that at an advanced mass tourism stage, the potential to stimulate local agriculture was limited, if non-existent (Torres, 2002). Considerable blame is attached to the failure of tourist planners in Mexico to incorporate any agricultural development strategies in the planning process, leaving the linkages with farmers to occur spontaneously and to materialize by virtue of improvements in the region’s economy. It was argued that “planners counted on a passive ‘trickle-down effect’ to stimulate local agriculture rather than an integrated programme of action and investments” (Torres and Momsen, 2004). Nevertheless, in the absence of the appearance of such ‘natural linkages’ a small number of wholesalers with supplies from outside the local region came to dominate food provisioning to the Cancun hotels and effectively excluded smaller suppliers or producers. The largest segment of food supplied to Cancun is “brought 1000 miles away from Mexico City by large wholesalers who dominate the market” (Torres and Momsen, 2004). Likewise, wholesalers in the resorts of St Lucia were “by far the most common supplier of food to the hotels” (Timms, 2006).

Based upon a wider analysis of Caribbean food supplies to hotels, Meyer (2006, 2007) draws attention to the common problem of the mismatch between supply and demand and the absence of intermediary support structures that enable buyers and suppliers to come together as factors mitigating the strengthening of inter-sectoral linkages. The issue of lack of communication and understanding” between the tourism industry and local food producing sectors in developing countries is further stressed by Telfer and Wall (1996) in Indonesian research. These authors draw attention to the need to make local suppliers more aware of the quantity and quality standards of products as demanded by tourism establishments as well as when demand will increase. If farmer supplier projects are to succeed, the capacity of local food suppliers to meet these requirements of the modern tourism sector must be enhanced (Richardson-Ngwenya and Momsen, 2011). This represents a key finding from work on agriculture-tourism linkages in the contemporary Caribbean (Brown, 2003; Rhiney, 2011a, 2011b). From the experience of Cancun it was disclosed

the tourism industry did not trust local producers or believe them capable “of growing reasonable quality products at a competitive basis” (Torres and Momsen, 2004). Accounting for the dominance of food supplies from outside the local region to Cancun hotels local chefs isolated the reasons of lack of local production, insufficient local quantity, and poor quality as the primary factors (Torres, 2002, 2003).

Outside of the Caribbean, Mexico and Indonesia, research on agriculture-tourism linkages is undeveloped. The limited expansion of local food sourcing in Fiji is attributed variously to a combination of “availability, price, consistency, quality of local products, lack of technology, infrastructure and finance”; further issues surround the fact that “tourists demand foods that are often not grown in the host region or that tourists are reticent to try local foods or local cuisines” (Bernó, 2011). In the beach resorts of Kenya Mshenga (2010) observes differences in hotel characteristics as associated with whether local sourcing was enacted; for example smaller hotels were likely to purchase more local agricultural products as they “required smaller quantities which could easily be supplied by local farmers or suppliers” (Mshenga, 2010). The different procurement patterns exhibited by different categories of hotel are observed also in the island of Zanzibar (Meyer, 2011). In accounting for the high share of imported foodstuffs in the tourism economy of Zanzibar, Meyer (2011) draws attention to both the lack of local food suppliers and in the case of local meat, including poultry, its unsuitability (often due to health and quality standards or considerations) for use in high-end hotels or restaurants. Other factors for reliance of accommodation establishments upon imported foodstuffs can include the links between foreign-owned and managed establishments and overseas food suppliers as well as the nature of training received by hotel food and beverage decision-makers (Konig, 2007). From recent work conducted on ‘alternative tourism’ in three countries in Southern Africa, Hunt (2010) empirical findings drawn from the African luxury safari lodge sector confirm much of the above analysis on the reasons for limited linkage development between high-end tourism accommodation establishments and local agricultural producers.

Overall, the existing scholarship on tourism-agriculture linkages draws attention to a suite of different influences that impact upon food supply procurement patterns and backward linkage development (Torres and Momsen, 2011). The characteristics and strength of linkages are considered as associated with several demand-related, supply- or production related and marketing or intermediary factors (Torres, 2003). Meyer (2007) asserts that in order both to support the procurement of local inputs for accommodation establishments and maintain sustainable linkages between tourism and agriculture, “the demand, supply and marketing and intermediary related factors as well as government policy need to be taken into account”. In terms of production-related issues,

factors of significance include environmental considerations, the nature of local farming systems, and lack of local production of goods or types and quality of food demanded by tourists and/or the high prices of local products (Meyer, 2006). In certain parts of the developing world agro-ecological limitations on small farmer production through environmental constraints, hurricanes, droughts and bushfires must be acknowledged (Rhiney, 2011b). It is observed, however, that the susceptibility of local farming to natural hazards is a contributory factor to the general distrust among expatriates of the capacity of the local food network to meet requirements of the hotel sector (Rhiney, 2011a).

A critical demand-related factor is the nature of tourism development with foreign-owned or managed enterprises and expatriate chefs reliant upon imports and with only weak links to local producers (Torres, 2003; Meyer, 2006). In addition, larger and higher-end hotels exhibit a tendency towards using imported foods rather than locally grown produce (Telfer and Wall, 2000). Importantly, the existing research suggests opportunities for “creating demand for local foods is greatest among certain nationalities and with more adventurous non-mass tourists” (Torres, 2003). In some cases local foods or locally produced agricultural products were not promoted to hotel guests and reserved for serving to local staff. From Caribbean research in particular it has been observed that the recruitment of foreign-born or overseas trained chefs may have serious ramifications for fomenting local tourism-agriculture linkages. It was revealed that foreign-born or trained chefs “were less willing to use local specialty items” and “generally complained about product quality, primarily product appearance and size” as well as “sanitation standards and seasonality of local food products” (Rhiney, 2011a). Correspondingly, the mass of foreign chefs preferred to use familiar products as frozen or processed food imports or food varieties, which they knew how to prepare (Timms and Neill, 2011).

Finally, marketing or intermediary related factors, including government policy, also can assume a vital role in defining tourism-agriculture linkages (Torres, 2003). Among the most significant influences are the availability and poor quality of regional transport and distribution infrastructure, kickbacks paid to local chefs by large food suppliers and the inexperience of local producers in marketing (Hunt, 2010). In addition, Rhiney (2011b) and Meyer (2006) stress limited communication between key stakeholders. The frequently weak channel of communication between the tourism and agricultural sector “means that there is generally limited awareness of what is required by tourists and what can be produced locally to satisfy the demands of the tourism sector” (Meyer, 2006). Other considerations observed in recent work conducted in Jamaica are lengthy payment periods of up to three months, a mismatch between supply and demand and the “exploitation of farmers by local

intermediaries" (Rhiney, 2011b). More broadly, the question of "untimely account settlement" by hotels with local producers is a thorny issue in the Caribbean region (Reid, 2009). Overall, it has been pointed out that "decades of under-investment mean that small-scale producers in developing countries often operate in areas with inadequate infrastructure (roads, electricity and irrigation)" (Oxfam International, 2010). Furthermore, it is evident that small-scale producers typically lack access to skills and services (training, credit, inputs), lack uniformity and function in geographically scattered locations which require 'creative solutions' to aggregate production (World Economic Forum, 2009; Oxfam International, 2010).

The limitations or lack of any government policy focus on energizing tourism-agriculture linkages is another common issue across the developing world as government tourism policy initiatives often are concentrated on increasing visitor numbers to the neglect of planning programmes for inter-sectoral collaboration and specifically for linking tourism and agriculture. To illustrate from Ghana it was observed recently that "not much effort has been made at the level of policy formulation and implementation to integrate the tourism and agriculture sectors" (Asiedu and Gbedema, 2011).

## Conclusion

In the context of the global South or developing world, recent work undertaken by the World Bank emphasizes "how tourism can be harnessed to promote a process of 'discovery' and economic diversification in the host economy" (Lejarraja and Walkenhorst, 2007). It was concluded that to the extent that local entrepreneurs can read the signposts about consumer demand "tourism can be an efficient channel to catalyze investments in new economic activities" through deepening linkages with tourism (Lejarraja and Walkenhorst, 2007). In their international overview of the lodging sector Timothy and Teye (2009) highlight the critical importance for destinations of expanding linkages between the accommodation sector and local economies. With incentives to increase domestic agricultural production and the disincentive to rely on imports, some observers contend "conditions have become more conducive for linkage formation between agriculture and tourism" (Timms and Neill, 2011). Added incentives for local sourcing relate to the making of low-carbon tourism destinations through reduction of 'food miles' (Gossling et al., 2011).

It is against this backdrop that this article sought to undertake a critical review of existing scholarship and sources around agriculture-tourism linkages and founded on the belief that expansion of backward linkages between tourism and agriculture can contribute to "sustainability in both tourism and agriculture sectors"

(Torres and Momsen, 2011). Furthermore, in drawing together material from a range of different investigations the analysis represents a response to the call made for additional "comparative research" to better interpret the links between tourism and agriculture (Telfer and Wall, 2000). The topic is especially pertinent in sub-Saharan Africa, a growth zone for tourism in the international tourism economy (Rogerson, 2007). Indeed, one key theme which emerges in the article is the underdevelopment of a specific African scholarship on agriculture-tourism linkages. Regrettably, African scholarship on agriculture-tourism linkages is relatively undeveloped (Konig, 2009; Hunt, 2010; Rogerson and Rogerson, 2011). Nevertheless, in sub-Saharan Africa the nexus between agriculture and tourism has been viewed as of "underexploited development potential" (Asiedu and Gbedema, 2011). New empirical work which interrogated the linkages between the safari lodge sector and local agriculture in South Africa, Zambia and Botswana points to only a limited development of food sourcing by lodges from proximate local suppliers even in the developed agricultural economy of South Africa (Hunt, 2010).

Although the empirical base remains thin it is clear that African policy makers can, to some extent, learn from the experience and research findings in other parts of the developing world concerning the key barriers to involving small producers in value chains. A recent report for the World Economic Forum (2010) highlights three sets of what are described as key business enablers to involve small producers more extensively. In strengthening business operations attention is focused on improved market information, improved access to financial services and overcoming infrastructural shortcomings, both in terms of 'hard' infrastructure (enhancing storage, transport logistics, better access to water) and 'soft' infrastructure (in terms of improved organizational capacity of farmers and establishing standards and guidelines to expand market access). In situations of the lack of supply chains this potentially can be addressed by policy interventions "through greater awareness of possible supply chains and the benefits they entail for both private enterprises and local service providers" (Janis, 2011). In addition, it is considered NGOs and tourism associations could assume a useful advocacy role in educating the tourism sector about the possibilities of developing food supply chains. Arguably, however, as a complex of factors function so as to influence the strength and durability of linkages between tourism and agriculture, the creation of sustainable and beneficial linkages is a complex and multi-faceted issue.

Undoubtedly, one of the central challenges in sourcing local food supplies is to institutionalize commitments that go beyond the interests of and involvement of specific individuals and apply an integrated policy approach (Meyer et al., 2004; Torres and Momsen, 2004; Hashimoto and Telfer, 2011). One often cited case of

'good practice' is the initiatives undertaken by the Sandals group, a large all-inclusive resort chain with properties in several Caribbean nations (Berno, 2011). Leading scholars in pro-poor tourism argue that the farmers programme initiated by the Sandals Group is "quite distinctive" and represents an example of how a private sector company has sought to focus on all three categories of barriers – demand-related, supply related and marketing or intermediary factors – to build tourism-agriculture linkages (Meyer et al., 2004). The initiative works across supply, demand and marketing and seeks to enhance good working relationships between farmers and hotels by improving the quality of produce, establishing proper pricing arrangements and enhancing communication between farmers and hotels (Meyer et al., 2004). The results of this initiative have been mixed in terms of the small farmer cooperatives and as Rhiney (2011a) points out after 14 years of the project intervention "only three of the six farmer groups initially involved in the programme are still functional".

In some small Caribbean nations it has been recommended that the Ministries of Agriculture and Tourism develop a joint policy framework "for the timely establishment of formal and informal linkages between agriculture and tourism" (Brown, 2003). Reid (2009) stresses the imperative to build "win-win linkages" and collaboration between tourism and agriculture both to reposition these sectors and spur economic growth more generally. At the outset, in Caribbean research the need is highlighted for local farmers to become more organised by developing production cooperatives or marketing associations in order to take advantage of emerging market opportunities in the 'sea sun and sand' hotel resort sector (Harry, no date). In Jamaica it was recommended that both the sector of tourism and agriculture should be overhauled in order "to better complement each other as well as the forging of strategic partnerships between the various stakeholders and interest groups" (Rhiney, 2011b). In a useful contribution Timms and Neill (2011) aver that "demonstrations, trade shows and other face-to-face promotions can help communicate demand to producers, who can then tailor their production to existing and newly identified and communicated demands by the chef and tourists, who would also be more familiar with local products". Other promising interventions in the Caribbean surround questions of local food production and the development of a local cuisine which utilises local products for the region's beach resorts. Practical tool kits are issued to promote farmer-hotel partnerships and of food that is 'true to its roots' and using local products; examples would be the black belly sheep in Barbados, ackee in Jamaica or crab and callalou in Trinidad (see Joshua 2008). A similar intervention occurred in Fiji with the production and promotion of a local foods cookbook for hotels to foster the use of local food products and a distinctive South Pacific cuisine (Berno, 2011).

Above all, the building of trust between tourism and agriculture stakeholders is considered an essential foundation for evolving sustainable linkages between the tourism and agriculture sectors (Reid, 2009; Hunt, 2010). On the one hand, the agriculture sector must facilitate the development of the product and service value chain necessary to supply products and develop small business enterprises capable of meeting and maintaining the standards (health and safety) which are necessary for a tourism product. On the other hand, the tourism sector could deepen linkages by encouraging stakeholders to source raw and value added products from local producers, whenever possible, to support the development and promotion of tourism products (Reid, 2009). In final analysis, the strengthening of linkages between agriculture and tourism in the developing world as a whole, and in sub-Saharan Africa in particular, remains a research topic of considerable significance and policy relevance.

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