African Center for Project Management

Digital Learning International Nairobi - Kenya

Assignment Three (3)

Diploma in International Development Studies

Submitted by

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Introduction

Sustainable development and poverty reduction depend on the protection and sustainable management of our common property resources, including forests, biodiversity, and water resources. Improved management of these natural resources is the key to achieving sustainable development. The poor, especially in rural areas, heavily depend on the productivity and environmental services of these natural resources for the livelihoods and quality of life.

1- What are the socio-economic, political and ethical issues to be taken into consideration for natural resources conservation and management?

The socio-economic, political and ethical issues are the factors that have negative influence on an individual's economic, political and ethical activities including: lack of education, poverty, government policies, cultural and religious discrimination, over population, unemployment, conflict and corruption (Kennedy, J.J., and J.A. Mincolla. 1985). When we talk about natural resources, we put all these issues into considerations so that appropriate measures and policies are put in place while managing and exploiting the natural resources for the common benefit of the population.

A large proportion of Africans are dependent on natural resources and the environment to subsist. The natural environment is the foundation of livelihoods based on subsistence and commercial farming, animal husbandry, trade and mining. These activities are inextricably linked to the availability of natural resources and the sustainable management of those resources. Factors such as population growth, human movements, current and future land scarcity, rising levels of global consumption and consumerism, climate change and political and social instability all impact on the natural environment and, thereby, on livelihoods. In turn, the allocation, management and exploitation of increasingly limited natural resources can contribute to conflict in Africa.

Since the publication of the Brundtland report in 1987, the concept of sustainable development has moved center-state in international discussions. The Rio Conference strengthened the implications of participatory governance and highlighting natural resources. The concept of

participation has been disseminated via two specific channels. One of these was based on the limits of the technology transfers in the field of agriculture's research and rural development; the other challenges the centralized management of natural resources by the state *(Barnaud 2008).*

In the field of natural resources management, studies running counter to the tragedy of the commons (Hardin, 1968) have constituted the real crucible for the development of the concept of the participation (Barnaud 2008). A considerable volume of literature has developed (McCay and Acheson, 1987; Wade, 1988; Ostrom, 1990; Brimley, 1992 amongst others) highlighting the fact that local institutions, and therefore the community which support them, have an essential part to play in the efficient and sustainable management of the natural resources.

2. Who controls the management of natural resources and under what criteria are they deemed to be a success?

Natural rescues is normally referred to things like land, air, minerals, forests, fisheries and water while the natural resources management refers to the sustainable utilization of these resources. All together, these recourses provide the ecosystem services that provide better quality to human life. In many Countries in Africa, including South Sudan, the natural resources is management by the government at both state, county and local levels. In South Sudan the overall management of these resources has been since the independent been placed under different department of the government. For example, the ***wildlife resources*** are being managed by the department of Wildlife Conservations Society with the national part on top of the agenda.

Forests are under the Ministry of Agriculture and Forestry that work to ensure good prospect for farming, horticulture and fishing sectors which are renowned worldwide for producing good-quality food what is safe and affordable. The Ministry is working with all the stakeholders to restore and maintain natural areas. It aims to consolidate the agriculture sector's leading national position, strengthen the link between the nature and agriculture, and improve farmers' economic situation. These natural resources are being managed and protected by the appropriate laws, including the constitution which governance the whole operation of the state. For example the Wildlife is managed according the Wildlife Conversation and National Parks Act 2003.

3. How can you support natural resources conservation?

Proving support to the preservation of natural resources is important both individual and communities at large. Rural communities across Africa are facing immense threats to their land and natural resources. From increasing foreign investment and speculation by national elites, to rising population and climate change. Land claims government by customary rules or indigenous people are beset from all sides *(Rachel Knight (22 February 2016).* For us to provide support to the preservation of natural resources, we would need to employ the following:

(i) ***Involve all the community members, recognizing that communities are diverse and that different stakeholders groups may have conflict interest.*** Notably, advocates may need to support the healing and reunification of community fragmented by conflict or outside interference. It may be necessary to use mediation and conflict resolution to arrive at intra-community agreement before moving forward with land protection efforts.

(ii) ***Remember that leader's interest may differ from community member's interest.*** It is necessary to build direct connections with community members – not only leaders – to ensure that continued community support is possible even when leaders act against community interest.

(iii) ***Build critical mass around a unified community future vision to challenge outsiders' ''divide and conquer' 'efforts.*** Companies and other actors seeking land and natural resources often use divisive tactics to weaken communities' opposition to investment projects. Building a critical mass around a common, community-created vision for the community's future can strengthen community cohesion, unite community members around common goals, and make it harder for outsiders to weaken community ties.

(iv) ***Building on community member's exiting expertise and skills and strengthen community capacity to advocate for their land and natural resources rights.*** Community members are generally experts on their lands and natural resources. When formulating an advocacy strategy, advocates should leverage a community's existing skills, asserts, knowledge and resources. Advocates should also invest in community capacity building so that community can resist future injustice without relying on external support. Recommended types of

capacity building, skills for: project management, mobilization fund raising and resources collection, mapping, data and monitoring and evaluation.

(v) Leverage community land protection efforts to strengthen local governance. *Drafting and formally adoption community by-laws for good governance and electing a representative, diverse land governing body can significantly strengthen local land and natural resources governance.*

(vi) Ensure that communities underhand the benefits and costs of a proposed investment. To ensure that communities make informed decisions about whether to share their lands with an investors, it is important to support communities to understand the socio-economic returns of conserving their natural resources as compared to the promised financial payoff of selling or leasing their land to investors.

(vii) Work closely with government actors to build their understanding and support. *Government agencies are not monolithic – advantages can often find minister and high-level administrators who will strongly advocate for community rights. To ensure authentic, enduring success of a community land and natural resources protection efforts, government decision-makers must be convinced of the efforts' value and legitimacy.*

(viii) Leverage the media and use it to ensure that all voices are heard. *Target print, radio and social media to spread advocacy and community land protection messages out to the wider region, nation and world. Ensure to include women's youth, and elder's voices – different messages may resources with different audiences.*

(ix) Link community land protection efforts to wider networks for support. *This entails forming strong networks of likeminded organizations and actors (at the local, national and international levels). Such network energize efforts, encourage the sharing of experiences and strategies, and may help in influencing policymakers.*

(x) Link small community-*driven initiatives to a bigger dream''. Community driven development may be challenging and time-consuming. To help motivate a community towards its future visions and goals, break ''big dream'' into small tasks and initiatives that can be accomplished with limited resources in shorter period.*

Front-line advocates around the world urgently need to share their community land protection strategies and learn from one and others success and mistakes. The struggles and victories of an

individuals and organization or community can at times feel overshadowed by influential opponents and daunting global trends.

4. What is sustainable agriculture? Summarize the potential advantages of new agriculture technologies and the major concerns. Are new technologies the solution to the world's food security in the 21st century?

Sustainable agriculture is a broader term, is using farming practices consideration the ecological cycles. It is also sensitive towards the microorganisms and their equations with the environment at large. In simpler terms, sustainable farming is farming by promoting methods and practices that are economically viable, environmentally sound and protect public health. It does not only concentrate on the economic aspect for farming, but also on the use of non-renewable factors in the process thoroughly and effectively. This contributes to the growth on nutritious and health food as well as bring up the standard of living of the farmer (GIZ 2015).

Advantages of new agriculture technologies

Technology has played a big role in the developing the agriculture industry. Today it is possible to grow crops in a desert by use of agricultural biotechnology. With this technology, plants have been engineered to survive in drought condition to survive in drought conditions. Though genetic engineering scientist scientists have managed to introduce traits into existing genes with goal of making crops resistant to droughts and pests.

Let's take a good example**.** A bacterium known as" Bacillus Thuringiensis" acts like a reservoir, it enables crops to be insect-resistant, so these genetically modified crops will grow without any interference from pests. The invention of this technology is being used in developing countries to grow cash crops like cotton, since this genetically engineered cotton plants are pest resistant, they grow better than the normal cotton plants hence yielding good results (*Karehka Ramey 2012).*

The use of mobile apps by a farmer to calculate the amount of grass available in the field, saves the farmer time and money, they will know how much is left and what to feed their animals. Technology has turned farming into a real business, now farmers have electrified every process, a consumer can place an order directly online, and the product will be transported from the farm

to the consumer in time when it's still fresh. This saves the farmer money and it cuts out mediators who tend to buy low from farmers and sell high to end consumers.

- **Use of machines on farms.** Now a farmer can cultivate on more than 2 acres of land with less labor, and can cut costs even more when they are looking for a used tractor and other harvesting technology, versus new equipment. The use of planters and harvesters makes the process so easy. In agriculture, time and production are so important; you have to plant in time, harvest in time and deliver to stores in time. Modern agricultural technology allows a small number of people to grow vast quantities of food and fiber in a shortest period of time.

- **Modern transportation**: This helps in making products available on markets in time from the farm. With modern transportation, consumers in Dubai will consume a fresh carrots from Africa with in the same day that carrot lives the garden in Africa. Modern transportation technology facilities help farmers easily transport fertilizers or other farm products to their farms, and it also speeds the supply of agricultural products from farms to the markets where consumers get them on a daily basis.

- **Cooling facilities:** These are used by farmers to deliver tomatoes and other perishable crops to keep them fresh as they transport them to the market. These cooling facilities are installed in food transportation trucks, so crops like tomatoes will stay fresh upon delivery. This is a win-win situation for both the consumers of these agricultural products and the farmers. How? The consumer's gets these products while still fresh and the farmer will sell all their products because the demand will be high.

- **Genetically produced plants** like potatoes, can resist diseases and pests, which rewards the farmer with good yields and saves them time. These crops grow very fast they produce healthy yields. Since they are resistant to most diseases and pests, the farmer will spend less money on pesticides, which in return increases on their (RIO) return on investment.

- **Development of animal feeds.** This has solved the problem of hunting for grass to feed animals, now these feeds can be manufactured and consumed by animals. The price of these feed is fair so that a low income farmer can afford them. Most of these manufactured animal feeds have extra nutrition which improve on the animal's health and the output of these animals will also increase. In agriculture, the health of an animal will determine its output. Poorly feed animals are always unhealthy and they produce very little results in form of milk, meet, or fur.

- **Breeding of animals which are resistant to diseases.** Most of these genetically produced animals will produce more milk or fur compared to normal animals. This benefits the farmer because their production will be high. Cross breeding is very good in animal grazing, cross breed animals are more strong and productive.

- **Irrigation of plants.** In dry areas like deserts, farmers have embraced technology to irrigate their crops. A good example is in Egypt, were farmers use water pumps to collect water from river Nile to their crops. Most of these farmers grow rice which needs a lot of water, so they manage to grow this rice using irrigation methods enhanced by advanced technology. Advanced water sprinklers are being used to irrigate big farms and this helps the crops get enough water which is essential in their growth. Some farmers mix nutrients in this water, so also improves on the growth of these crops.

5. How does afforestation contribute towards sustainable development?

Sustainable Development Goal 15 aims to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss". Forests have a significant role in reducing the risk of natural disasters, including floods, droughts, landslides and other extreme events. At global level, forests mitigate climate change through carbon sequestration, contribute to the balance of oxygen, carbon dioxide and humidity in the air and protect watersheds, which supply 75% of freshwater worldwide *(UN 2015).*

Investing in forests and forestry represent an investment in people and their livelihoods, especially the rural poor, youth and women. Around 1.6 billion people - including more than 2,000 indigenous cultures - depend on forests for their livelihood. Forests are the most biologically-diverse ecosystems on land, home to more than 80% of the terrestrial species of animals, plants and insects. They also provide shelter, jobs and security for forest-dependent communities.

Therefore, the future of forests and forestry in sustainable development at all levels was at the core of the XIV World Forestry, hosted in Durban from 7 to 11 September 2015. The Durban Declaration called for new partnerships among forest, agriculture, finance, energy, water and other sectors, as well the engagement with indigenous people and local community. The importance of investing in world's forests and of taking "political commitment at the highest levels, smart policies, effective law enforcement, innovative partnerships and funding" was also recalled by the UN Secretary-General Mr Ban Ki-moon in his Message on the occasion of the 2015 International Day of Forests.

Both the International Day of Forests, launched in 2013 and the International Year of Forest proclaimed for 2011 aimed at raising awareness on the importance of all types of forests and of trees outside forests.
Prior to the 2030 Agenda for Sustainable Development, the outcome document of the Rio+20 Conference, the Future We Want, in its paragraphs 193- 196 stress the importance of improving the livelihoods of people and communities by creating the conditions required to sustainably manage forests. It also recognizes the role of the UN Forum on Forests in addressing forest-related issues in a holistic and integrated manner, and in promoting international policy coordination and cooperation in order to achieve forest management. Paragraph 196 calls for the mainstreaming of sustainable forest management and practices into economic policy and decision-making.

Chapter 11 of Agenda 21 is entitled 'Combating Deforestation' and is devoted to sustain the multiple roles and functions of all types of forests, forest lands and woodlands.

On one side, the Agenda highlights the major weaknesses in the policies, methods and mechanisms adopted to support trees, forests and forest lands and the multiple ecological, economic, social and cultural roles. Therefore, on the other side, it identifies, among its objectives, the strengthening of forest-related national institutions, the enhancement of the scope and effectiveness of activities related to the management, conservation and sustainable development of forests, and the sustainable utilization and production of forests' goods and services in both the developed and the developing countries.

The Agenda also mentions the importance to improve human, technical and professional skills, as well as expertise and capabilities to effectively formulate and implement policies, plans, programmes, research and projects on management, conservation and sustainable development of all types of forests and forest-based resources, and forest lands inclusive, as well as other areas from which forest benefits can be derived.

6. What could be the consequences of global warming and a rise in the sea level?

Answering this question correctly would be important, as even a seemingly slight average temperature rise is enough to cause a dramatic transformation of our planet *(Melissa Danchak 2016).* According to the National Climate Assessment, human influences are the number one cause of global warming, especially the carbon pollution we cause by burning fossil fuels and the pollution-capturing we prevent by destroying forests. The carbon dioxide, methane, soot, and other pollutants we release into the atmosphere act like a blanket, trapping the sun's heat and causing the planet to warm. Evidence shows that 2000 to 2009 was hotter than any other decade in at least the past 1,300 years (NCC 2014). This warming is altering the earth's climate system, including its land, atmosphere, oceans, and ice, in far-reaching ways.

More frequent and severe weather

Higher temperatures are worsening many types of disasters, including storms, heat waves, floods, and droughts. A warmer climate creates an atmosphere that can collect, retain, and drop more water, changing weather patterns in such a way that wet areas become wetter and dry areas drier. "Extreme weather events are costing more and more.

According to the National Oceanic and Atmospheric Administration, in 2015 there were 10 weather and climate disaster events in the United States—including severe storms, floods, drought, and wildfires—that caused at least $1 billion in losses. For context, each year from 1980 to 2015 averaged $5.2 billion in disasters (adjusted for inflation). If you zero in on the years between 2011 and 2015, you see an annual average cost of $10.8 billion (NOAA 2015).

The increasing number of droughts, intense storms, and floods we're seeing as our warming atmosphere holds—and then dumps—more moisture poses risks to public health and safety, too. Prolonged dry spells mean more than just scorched lawns. Drought conditions jeopardize access to clean drinking water, fuel out-of-control wildfires, and result in dust storms, extreme heat events, and flash flooding in the States. Elsewhere around the world, lack of water is a leading cause of death and serious disease. At the opposite end of the spectrum, heavier rains cause streams, rivers, and lakes to overflow, which damages life and property, contaminates drinking water, creates hazardous-material spills, and promotes mold infestation and unhealthy air. A warmer, wetter world is also a boon for food-borne and waterborne illnesses and disease-carrying insects such as mosquitoes, fleas, and ticks.

Higher death rates

Today's scientists point to climate change as "the biggest global health threat of the 21st century." It's a threat that impacts all of us especially children, the elderly, low-income communities, and minorities and in a variety of direct and indirect ways. As temperatures spike, so does the incidence of illness, emergency room visits, and death. "There are more hot days in places where people aren't used to it," Haq says. "They don't have air-conditioning or can't afford it. One or two days isn't a big deal. But four days straight where temperatures don't go down, even at night, leads to severe health consequences." In the United States, hundreds of heat-related deaths occur each year due to direct impacts and the indirect effects of heat-exacerbated, life-threatening illnesses, such as heat exhaustion, heatstroke, and cardiovascular and kidney diseases. Indeed, extreme heat kills more Americans each year, on average, than hurricanes, tornadoes, floods, and lightning combined (Aliya Haq 2015).

Dirtier air

Rising temperatures also worsen air pollution by increasing ground level ozone, which is created when pollution from cars, factories, and other sources react to sunlight and heat. Ground-level ozone is the main component of smog, and the hotter things get, the more of it we have. Dirtier air is linked to higher hospital admission rates and higher death rates for asthmatics. It worsens the health of people suffering from cardiac or pulmonary disease. And warmer temperatures also significantly increase airborne pollen, which is bad news for those who suffer from hay fever and other allergies (Aliya Haq 2015).

Higher wildlife extinction rates

As humans, we face a host of challenges, but we're certainly not the only ones catching heat. As land and sea undergo rapid changes, the animals that inhabit them are doomed to disappear if they don't adapt quickly enough. Some will make it, and some won't. According to the Intergovernmental Panel on Climate Change's 2014 assessment, many land, freshwater, and ocean species are shifting their geographic ranges to cooler climes or higher altitudes, in an attempt to escape warming. They're changing seasonal behaviors and traditional migration patterns, too. And yet many still face "increased extinction risk due to climate change." Indeed, a 2015 study showed that vertebrate species animals with backbones, like fish, birds, mammals, amphibians, and reptiles are disappearing 114 times faster than they should be, a phenomenon that has been linked to climate change, pollution, and deforestation.

More acidic oceans

The earth's marine ecosystems are under pressure as a result of climate change. Oceans are becoming more acidic, due in large part to their absorption of some of our excess emissions. As this acidification accelerates, it poses a serious threat to underwater life, particularly creatures with calcium carbonate shells or skeletons, including mollusks, crabs, and corals. This can have a huge impact on shellfisheries. Indeed, as of 2015, acidification is believed to have cost the Pacific Northwest oyster industry nearly $110 million. Coastal communities in 15 states that depend on the $1 billion nationwide annual harvest of oysters, clams, and other shelled mollusks face similar long-term economic risks.

Higher sea levels

The Polar Regions are particularly vulnerable to a warming atmosphere. Average temperatures in the Arctic are rising twice as fast as they are elsewhere on earth, and the world's ice sheets are melting fast. This not only has grave consequences for the region's people, wildlife, and plants; its most serious impact may be on rising sea levels. By 2100, it's estimated our oceans will be one to four feet higher, threatening coastal systems and low-lying areas, including entire island nations and the world's largest cities, including New York, Los Angeles, and Miami as well as Mumbai, Sydney, and Rio de Janeiro.

7. Trace the development of WTO and outline its policies concerned with sustainable development.

The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments. The goal is to help producers of goods and services, exporters, and importers conduct their business. Trade is recognized as an engine for inclusive economic growth and poverty reduction that contributes to the promotion of sustainable development both by the 2030 Agenda and its accompanying Sustainable Development Goals, as well as, the Addis Agenda of Action on Financing for Development. Accounting for more than 50% of low-income countries' GDP, international trade can be an important source of finance to both the private sector and the public sector in developing countries. Trade growth enhances a country's income generating capacity, which is one of the essential prerequisites for achieving sustainable development.

WTO cut living cost and raise living standards: We are all consumers. The prices we pay for our food and clothing, our necessities and luxuries, and everything else in between, are affected by trade policies. The WTO's global system lowers trade barriers through negotiation and operates under the principle of non-discrimination.

The WTO can settle disputes and reduce trade tensions: More trade, more traded goods and services and more trading countries they bring benefits but they can also increase the potential for friction. The WTO's system deals with these in two ways**.** One is by talking: countries negotiate rules that are acceptable to all. The other is by settling disputes about whether countries are playing by those agreed rules.

The WTO can stimulate economic growth and employment: The relationship between trade and jobs is complex. It is true that trade can create jobs, but it is equally true that competition from imports can put producers under pressure and lead them to lay off workers. The impact of competition from foreign producers varies across firms in a sector, across sectors of the economy as well as across countries. So does the impact of new trade opportunities.

The WTO can ... cut the cost of doing business internationally: Many of the benefits of the trading system are more difficult to summarize in numbers, but they are still important. They are the result of essential principles at the heart of the system, and they make life simpler for the enterprises directly involved in trade and for the producers of goods and services.

The WTO can encourage good governance: Transparency shared information and knowledge levels the playing field. Rules reduce arbitrariness and opportunities for corruption. They also shield governments from lobbying by narrow interests.

The WTO can help countries develop: Underlying the WTO's trading system is the fact that more open trade can boost economic growth and help countries develop. In that sense, commerce and development are good for each other. In addition, the WTO agreements are full of provisions that take into account the interests of developing countries.

The WTO can give the weak a stronger voice: Small countries would be weaker without the WTO. Differences in bargaining power are narrowed by agreed rules, consensus decision-making and coalition building. Coalitions give developing countries a stronger voice in negotiations. The resulting agreements mean that all countries, including the most powerful, have to play by the rules. The rule of law replaces might-makes-right

The WTO can support the environment and health: An often-heard accusation is that the WTO system treats trade as the priority, at the expense of environmental and humanitarian objectives. This is untrue.

The WTO can contribute to peace and stability: This is an under-reported benefit of the WTO's trading system. Trade helps to sustain growth. Trade rules stabilize the world economy by discouraging sharp backward steps in policy and by making policy more predictable. They deter protectionism; they increase certainty. They are confidence-builders.

10 The WTO can be effective without hitting the headlines. Negotiations and disputes are news-makers, but a lot of vital WTO work takes place out of the limelight to help trade flow smoothly, for the benefit of the world economy and for all of us.

8. What are the initiatives taken to bridge the North-South Divide?

What's North and South Divide? From the onset of the Industrial Revolution in the 1760, the North became dominant in the UK's global trade in manufactures, due to its unusual entrepreneurial networks of family firms. After 1918, however, burgeoning nationalism abroad and a return to the gold standard stunted trade, while new consumer-oriented industries located in the Midlands and the South flourished. The resulting stagnation caused the modern North South divide to emerge. Examining the region's erstwhile strengths and failures is a good starting point for rebalancing the nation's economy and returning the North to prosperity.

In order to address the issue, the long list of initiatives were employed, including:

- Northern governmental institutions were recommended to promote postgraduate education in Southern countries through:
- Provision of long-term funding to improve working conditions and stability in Southern institutions
- Financial support for students to conduct studies in their country of origin or example, providing scholarships and funding for research.
- •Funding of necessary equipment, laboratory facilities and salaries for assistants

- Mentorship programmes that encourage Northern researchers to support young Southern researchers
- Development of ‘sandwich’ graduate programmes where students spend time in both Northern and Southern countries
- Organizational and financial support for online courses Intergovernmental organizations, international donor organizations and Northern governmental organizations should:
- Establish North–South research programmes and research networks and ensure that both Northern and Southern researchers have a substantive input to their design
- Encourage Southern researchers to return to academic institutions in the South to continue their research after completing postgraduate studies or research projects in the North
- Support Southern researchers in Northern countries to contribute to research in their countries of origin
- Encourage researchers affiliated to institutions in the vicinity to lead identification of regional, national and local research needs and engagement with policymakers and practitioners
- Encourage researchers affiliated to institutions in the vicinity to coordinate review and synthesis papers that summarize findings and apply those findings to regional, national or local contexts
- Financially support international journals to help span the divide North–South research programmes should:
- Use simple online application procedures, for example, document download/upload options as an alternative option to online forms
- Encourage experienced Northern and Southern scientists to mentor Southern researchers through the application process to act as principal investigators and to be lead authors
- Preferentially fund projects with researchers in lead or key roles from the country that is the focus of the research
- Encourage Southern researchers to lead data gathering, stakeholder consultation, and all possible aspects of research, with the support of experienced Northern and Southern researchers.

- Ensure that Northern researchers are mentored by Southern researchers to increase their cultural sensitivity and understanding of local contexts
- Require Northern researchers to undertake visits to the county being researched frequently for as long as possible, to interact with Southern researchers and seek guidance and support from them Southern governments should:
- Lobby intergovernmental organizations and international donor organizations to fund Southern research priorities by Southern research institutions
- Support local research programmes by providing research funding
- Promote development of graduate and post-graduate programmes in Southern academic institutions Southern research institutions should:
- Build alliances with both Northern and Southern scientific communities to share common research infrastructure and to strengthen local capacity to perform high-quality research
- Build networks of South–South collaborations to strengthen researchers' capacities to cooperate with Northern researchers and with other Southern colleagues, and make use of existing experiences, knowledge and expertise within the South
- Work together to address common research priorities that span several Southern countries in order to approach regional problems and maximize use of the existing research base
- Consolidate and create local graduate programmes in order to develop new generations of scientists
- Support young researchers to return from studies in the North so that they may continue to contribute to the generation of Southern knowledge
- Promote interdisciplinary and multinational projects incorporating Southern researchers
- Provide conditions for testing innovative and creative methodologies that match the local context rather than reproduce Northern approaches Publishers of international journals should:
- Have policies that welcome research from Southern countries, for example, enabling iterative submissions and revisions in order to secure scientific advice to improve quality, and provide free editorial language services and reduced fees for publications by Southern researchers.
- Provide open access or reduced fees for Southern researchers
- Increase representation of Southern researchers on editorial boards

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