WAVES
Country Report
Costa Rica
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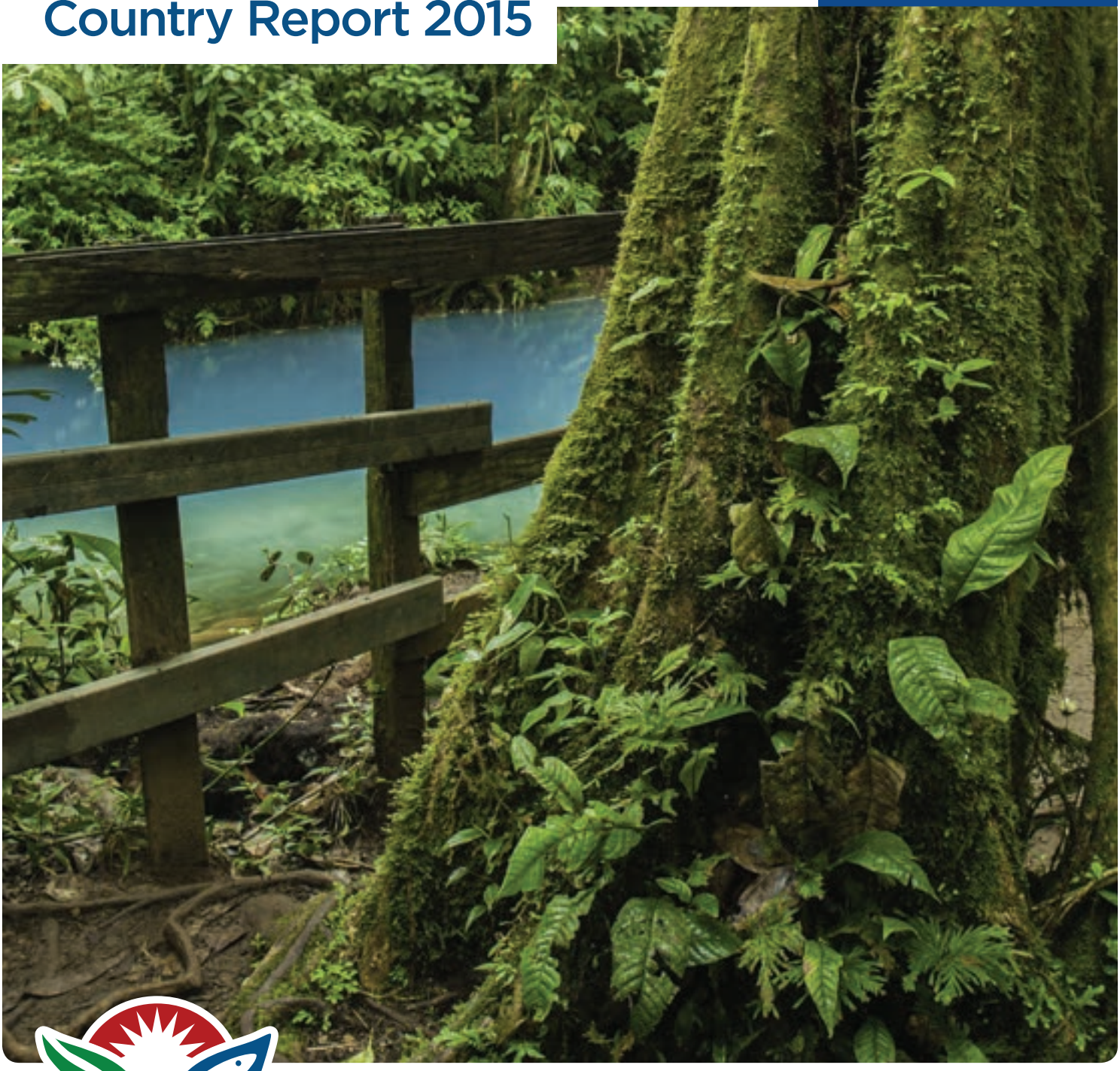
Wealth Accounting and Valuation of Ecosystem Services (WAVES)

Costa Rica
Country Report 2015



WAVES

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Wealth Accounting and the
Valuation of Ecosystem Services

Costa Rica
Country Report 2015

WAVES – Global Partnership for Wealth Accounting and Valuation of Ecosystem Services

Wealth Accounting and Valuation of Ecosystem Services (WAVES) is a global partnership led by the World Bank that aims to promote sustainable development by mainstreaming natural capital in development planning and national economic accounting systems, based on the System of Environmental-Economic Accounting (SEEA). The WAVES global partnership (www.wavespartnership.org) brings together a broad coalition of governments, UN agencies, nongovernment organizations and academics for this purpose. WAVES core implementing countries include developing countries—Botswana, Colombia, Costa Rica, Guatemala, Indonesia, Madagascar, the Philippines and Rwanda—all working to establish natural capital accounts. WAVES also partners with UN agencies—UNEP, UNDP, and the UN Statistical Commission—that are helping to implement natural capital accounting. WAVES is funded by a multi-donor trust fund and is overseen by a steering committee. WAVES donors include—Denmark, the European Commission, France, Germany, Japan, The Netherlands, Norway, Switzerland, and the United Kingdom.

Contents

1| Introduction

The Wealth Accounting and Valuation of Ecosystem Services (WAVES) initiative is a global partnership led by the World Bank and a broad coalition of United Nations agencies, governments, international institutes, non-governmental organizations and academics, aiming to promote sustainable development by integrating the value of natural resources and ecosystem services into national accounts. WAVES aims to contribute to more informed decision-making that can ensure genuine green growth and long-term advances in wealth and human well-being.

Costa Rica is one of the WAVES partners from the developing world. The country has followed a development path based on investment in human capital and the conservation of its abundant natural resources, with successful results. For instance, the country ranks 68 among 187 countries in the Human Development Index (HDI), with high level of human development.[1] Natural capital of Costa Rica has a value of US$9,473 per capita, similar to Gross Domestic Product (GDP) per habitant (World Bank, 2011). The country has a rich history of pursuing economic development while managing its natural capital sustainably, being the first country to implement a Payment for Ecosystem Services (PES) scheme to conserve its forests and protect water reservoirs. Furthermore, the country's commitment to renewable energy development has being a key component of economic growth in last decades.

Despite these achievements, Costa Rica currently faces important challenges to its future development. A central issue is how to accelerate economic growth through a sustainable use of natural wealth. Urbanization and increasing demand for energy and agricultural growth are generating pressure on the country's natural resources. Land use conflicts in different regions are causing water degradation and pollution, and threatening coastal and marine resources. In addition, climate variability is affecting many regions of the country, its infrastructure and productive capacity. On the other hand, government authorities project that the country's future development will include the growth of tourism, the conservation of forests, agricultural development, green industries promotion, renewable energy investments and the consolidation of a low carbon growth path (towards Carbon Neutrality) for 2021.

Therefore, Costa Rica is at a crucial moment for strengthening the foundations of its sustainable development. In order to achieve this, sound knowledge and quantification of the main sources of national wealth and economic growth is required, particularly the value of the country's natural capital. Policy makers need more and better information about the alternative uses of land, the economic implications of water resources degradation, the value of services provided by ecosystems for leading industries, and the effectiveness of different policy instruments for sustainable management of natural resources.

In this regard, the construction of natural asset accounts like water, forests and coastal-marine resources, the integrated accounting of energy, and the valuation of ecosystem services for tourism, could support policy decisions for sustainable development. WAVES can therefore promote the valuation of natural capital, ecosystem services, and the integrated economic-environmental accounting to generate accurate information on the current use of natural resources for national policy planning. WAVES can also expand available information and indicators to monitor the progress of specific policy actions at regional or national level. In this way, WAVES would contribute better analytical and decision-making tools for policy making in

[1] See *Human Development Report 2014. Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience.* New York: United Nations Development Programme.

Costa Rica. In addition, given the global mandate of the WAVES Partnership, the platform provided for knowledge exchange and learning will be critical to learn from other countries and to be able to share experiences and best practices with developed and developing nations.

2| Context for Natural Capital Accounting

The wealth and sustainability of a country depend on the management and improvement of a portfolio of economic, social and environmental assets that constitute the total capital stock: physical capital (infrastructure, machinery, equipment), intangible capital (education, health, institutions), and natural capital (water, soil, forests, biodiversity). Ecosystems are natural assets that generate numerous environmental, economic and social benefits.

Natural resources, their importance and characterization have been extensively studied in Costa Rica. Several studies incorporate biophysical valuation or natural resource inventories, at a national, region or specific ecosystem level. Much of the academic and policy design work is related to water resources and forests. Others address issues related to biodiversity and climate change. There is also a vast literature related to the economic valuation of natural resources and ecosystem services. This knowledge base is a solid starting point for the construction of environmental accounts (a central component is the valuation of stocks and its variation in time).[2]

Natural Capital Accounting (NCA) was not implemented in the country until 2014, with initial efforts from the Central Bank of Costa Rica (BCCR), the responsible organization for the System of National Accounts (SNA). Still, there is previous experience in the country with NCA. During the 1990s, initiatives to build environmental accounts were supported. Of particular relevance is the work "Accounts Overdue: Natural Resource Depreciation in Costa Rica" (Solórzano et al, 1991), developed by the World Resources Institute (WRI) and the Tropical Science Center (CCT), which estimated the value of natural resources in Costa Rica for 1970–1989. The depreciation of forests (deforestation), soil (nutrient loss) and fisheries (overfishing) was estimated at US$ 4.1 billion (at 1984 prices), higher than the annual average value of Gross Domestic Product (GDP) during 1970–1989. Natural capital degradation could have caused a lower average annual economic growth rate by –1.5% to –2% during those years.

Another important work is "Gastos Ambientales en Costa Rica, 1991-1995" (Barrantes, 1997), by the Tropical Science Center (CCT), the National University (UNA), and with logistical support from the Central Bank of Costa Rica (BCCR). Government environmental expenditures were estimated (1991-1995), including actions related to forest and non-forest ecosystems, water resources, protection of air and climate, solid waste treatment, noise control, and soils. The exercise followed the methodological principles of SEEA-1993, with some adaptations to facilitate data collection. Years later, the study was updated to include environmental expenditure by the private sector (Barrantes, 2003). On average, during the 1990s Costa Rica's environmental expenditures accounted for 0.5% of GDP per year.

From these past experiences, the following lessons have been learned:

a. Environmental accounting requires solid institutional support with interdisciplinary working teams, because coordination is a central input for success;
b. A clear dimension of the scope of work and an adequate budget are necessary conditions for long-term activities;

[2] See the Costa Rica scoping study for more details.

c. Limited technical capabilities and expertise in the field of integrated environmental-economic accounting should be addressed as a priority (capacity building needs); and

d. The lack of an official fully developed environmental information system makes the construction of environmental accounts difficult.

Currently, the Central Bank (BCCR) is working on updating of the System of National Accounts, based on the SNA 2008 international statistical standard. The project time span is 2012–2015. The activities developed through WAVES for a modular (partial) implementation of the System of Environmental-Economic Accounting (SEEA 2012) will be aligned with the BCCR´s work. The SEEA 2012 framework follows a consistent accounting structure with the SNA 2008. This consistency allows the integration of environmental and economic statistics.

In addition, the Ministry of Finance (MH) is starting its work with public environmental expenditures accounting. A general objective is to make a better estimation and monitoring of government expenditures in the country, from a fiscal policy perspective. Moreover, the Ministry of Planning (MIDEPLAN) is incorporating a natural resources wealth framework into the National Development Plan guidelines. From a legislative perspective, relevant environmental bills are under discussion in Congress (on water, natural capital, climate change), with articles related to economic valuation of natural resources and its importance for policy decision making. Therefore, it is expected that these institutional and legislative advances will contribute in the medium term to strengthening NCA in the country.

3| Priority Accounts: Water Resources and Forests

During 2013/2014, a series of technical studies, interviews with experts, and workshops helped define the policy questions and work plan for WAVES-Costa Rica. A feasibility study and a policy entry points report defined priority policy areas for environmental accounting support. During this first stage, it was determined that two natural asset accounts would be started: water and forests. The construction of the two accounts would make important contributions to the National Plan for Integrated Management of Water Resources and the National Plans for Deforestation Reduction and Forest Development. At this stage, the options to develop energy and environmental expenditure accounts are being evaluated.

3.1| Water Account: Contribution to the Implementation of the National Plan for Integrated Management of Water Resources

Costa Rica has abundant water resources. The country's annual water supply is estimated at 110 km^3 (73 km^3 of surface runoff and 37 km^3 of natural recharge to aquifers; MINAET, 2008). Total annual withdrawals to meet domestic demand are estimated at 24.5 km^3. Hydroelectric generation accounts for 80% of total demand, followed by agriculture with 16%, and human consumption, tourism, industry and services making up less than 4%. It is estimated that 88% of withdrawals to meet the national demand for consumptive uses (other than electricity generation) come from groundwater sources, a fact that highlights the strategic relevance of a sustainable use of aquifers in the country.[3]

Despite the relative abundance of water resources in Costa Rica, water is not being used in a sustainable way. The degradation of watersheds (and consequently the coastal ecosystems) is

[3] IMTA (2008) *Elaboración de Balances Hídricos por Cuencas Hidrográficas y Propuesta de Modernización de las Redes de Medición en Costa Rica*. BID- Departamento de Aguas, MINAE.

getting worse in recent years. Only 5% of the country's wastewater is treated before being deposited in rivers, while just 2.4% of the population has access to a wastewater treatment plant. These figures are among the lowest rates in Latin America.[4] Recent analysis shows that 57% of rivers and estuaries have high levels of pollution, which affects the use of water for human consumption, irrigation in agriculture, or recreation. Additionally, it threatens marine biodiversity and several major tourism attractions.[5] Poor land use planning and the intensive use of pesticides have contributed to water resources degradation as well. Regarding hydropower generation, it is estimated that 75% of its potential has not yet been exploited (ICE, 2014). Erosion of soils, deforestation, high sediment production and other consequences of the degradation of watersheds are affecting electricity generation. The sustainable management of watersheds is essential to maintaining not only the quality of water resources, but also hydroelectric production, a key to future sustainable energy use.

The National Development Plan 2015–2018 indicates that aquifers are highly vulnerable, threatening water supply for human consumption and productive activities. Low coverage of sewerage networks and the use of nitrogen fertilizers and agrochemicals threaten groundwater sustainability, and represent considerable environmental risk factors. One consequence of the limited land use planning has been the unsustainable exploitation and pollution of aquatic and terrestrial ecosystems and the deterioration of water quality. Coordination and planning failures negatively affect national water resource management (MIDEPLAN, 2014).

In response to problems with water resources management and to promote sustainable water resources use, policy guidelines have been established with the National Plan for Integrated Management of Water Resources (PNGIRH). One of the central goals of the PNGIRH is to complete the inventory of surface waters, aquifers, aquifer recharge areas and springs in the country. Additionally, it seeks to consolidate a program of monitoring water quality and strengthening the strategic management of groundwater. It also plans to consolidate interagency coordination and align the work of water management related organizations at a national, regional and local level (MINAET, 2008).

The PNGIRH will be strengthened with the new Water Law, under discussion at Congress.[6] The Law aims to regulate the protection, exploitation and sustainable use of continental and sea water, in such a way as to ensure universal access that is fair and equitable, both in terms of quantity and quality. A central principle of new legislation is the economic value of water. Article 2 declares water as an economic good with value in all its diverse competing uses. The Law states that it is the responsibility of government authorities to use economic valuation of water resources as a working tool for policy decisions. Moreover, the Law creates the National Information System for Integrated Management of Water Resources (SNIGIRH), managed by the Department of Water at MINAE. The SNIGIRH will integrate and improve available data and information related to water resources in the country.

A key issue is the use of water for production and the demand from leading industries in the country. Manufacturing and services account for a significant share of national production and

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4 UNDP (2013), Op. cit.

5 Mora, D. (2012) *Calidad sanitaria de los esteros y/o desembocaduras de ríos en los litorales de Costa Rica: 1996–2011*. Laboratorio Nacional de Aguas. San José: Instituto Costarricense de Acueductos y Alcantarillados (AyA).

6 Asamblea Legislativa de la República de Costa Rica. Departamento de Comisiones. Comisión Permanente de Ambiente. Ley para la Gestión Integrada del Recurso Hídrico. Expediente No. 17,742. Dictamen afirmativo unánime. March 27, 2014.

employment, and water demand as well. However, these figures do not yet account for all the consumption of water by agriculture (which might be significantly higher when incorporating irrigation and self-consumption) and hydropower generation (which provides 80% of national electricity supply). This example highlights the need for better accounting of water resources in the country.

With the support of WAVES, a water account is being compiled to organize the hydrological and economic information of the country in a coherent and consistent framework and thus contribute to the PNGIRH, by providing comprehensive information on: [7]

- Stocks and flows of water resources within the environment with a regional and watershed classification;
- The economic pressures on the environment in terms of water abstraction and wastewater emissions released to the environment or removed from wastewater;
- Water supply and water use as an input for production and human consumption;
- Existing water management infrastructure and the investments made during each accounting period;
- Quality of water resources in its entirety (best practices for water use and conservation).

3.2| Forest Account: Contribution to National Plans for Deforestation Reduction and Forest Development

According to the National System of Conservation Areas (SINAC), forests have the highest coverage of land use in the country, with approximately 52.4% of total area (including forest, wetlands, mangroves, heath and grasslands).[8] Since the 1970s, Costa Rica has invested significant resources in protecting forests and biodiversity through SINAC and the National Forestry Financing Fund (FONAFIFO). The country has 25.9% of its territory classified as a protected area, distributed in the various categories of management: national parks (46.4%), national wildlife refuges (17.5%), reserves forest (15.9%) and protective zones (11.6%). Since 1997, nearly US$300 million have been allocated to reduce deforestation through the system of Payments for Environmental Services (PES), with over 10,000 contracts with private forest owners.[9] The policies of forest conservation, protection of national parks and PES, among others, have consolidated a forest sector that contributes significantly to the mitigation of greenhouse gas (GHG) emissions. Pratt et al (2010) argue that PES could contribute significantly to the mitigation of GHG emissions over the next 20 years and be a key component of the National Climate Change Strategy (ENCC).

To realize its full potential and to continuously contribute to deforestation reduction, the PES requires incorporating 250,000 additional hectares per year until 2030. Based on the PES, the REDD+ (Reduced Emissions from Deforestation and Forest Degradation) strategy of the government of Costa Rica is seen as the third generation of policies to reduce deforestation in the country. The strategy seeks to continue conservation efforts, strengthening the forest industry, and promoting the responsible use of wood and derived products, as well as increasing the country's forest area. It is estimated that REDD+ will require investments of around US$34 million annually to maintain the actual PES contracts, promote the recovery of forest cover

[7] UNSD (2012) *System of Environmental-Economic Accounting for Water (SEEA-Water).* United Nations Statistics Division. New York: United Nations.

[8] Mapa de Tipos de Bosque de Costa Rica, 2013. Inventario Nacional Forestal. San José: SINAC.

[9] Own estimation with data from FONAFIFO, www.fonafifo.go.cr, retrieved on January 25, 2015.

through natural regeneration and reforestation, and consolidate the expansion of PES in mature forests (MINAET and FONAFIFO, 2010).

The REDD+ strategy is a key component of the National Plan for Forest Development (PNDF) 2011–2020. The Plan is based on seven strategic areas (forest land management, positioning the forestry sector, competitiveness of forestry industry, sustainability of forestry, coordination, organizational efficiency and effectiveness, innovation and sustainability of funding, and climate change, mitigation and adaptation). The PNDF highlights the need for a solid and innovative policy framework that recognizes the value and importance of forests to society. The Plan makes clear the relationships and connections of forests with other development agendas, such as clean energy production, the provision of water for human consumption and agriculture, tourism, and other land uses that maintain a close link to forests (MINAET, 2011).

The PNDF indicates that in order to maintain and increase forest cover, it is necessary to make it profitable and sustainable through the recognition of their positive externalities. There is the need to accurately estimate the value of all ecosystem services provided by forests, like safe water supply for hydroelectric generation, control of land degradation and sedimentation to prevent damages to infrastructure, protection of biodiversity and its use in productive activities such as tourism (recreation, landscaping) and sustainable agriculture (buffer zones, pollination), and their roles as natural barriers to extreme hydro meteorological events (droughts, floods, storms). The estimation of the value of forests in an integrated way can orient policy design and financial engineering in the long term.

By constructing a Forest Account that incorporates physical and monetary values and emphasizes on ecosystem services WAVES will significantly contribute to informing policy decisions on the REDD+ strategy and PNDF 2011–2020. The new national forest inventory, with data for 2013, will be a key tool both for advancing the REDD+ strategy and to serve as a basis for building physical accounts for forests. Moreover, Costa Rica has extensive experience with the mapping of forest cover, the establishment of forest inventory plots, and estimation of biomass and allometric equations to analyze the dynamics of forests. There are also numerous studies on the impact of PES in the conservation of forest land in Costa Rica, and the multiple environmental services these provide to different sectors.

WAVES will contribute to strengthen the solid basis of knowledge and policy experience of forest management in the country through:

- The construction of forest assets physical accounts (stock) by covered area (primary forest, plantations, regenerated areas, etc.), with additions (aforestation, natural expansion) and reductions (deforestation, natural regression), with the toal balance at the end of each accounting year;
- A monetary valuation of forest stocks, additions and reductions, plus revaluations;
- The biophysical and monetary accounting of ecosystem services of forests, highlighting carbon storage and flows of water for human consumption, industrial use and hydropower generation, and sediment control and soil conservation, among others;
- The elaboration of accounts for cultivated timber resources, natural, wood use, or non-timber products;
- The estimation of biomass and biomass change over time, to calculate the carbon storage and contribution to the mitigation of GHG emissions in the country.

The new Forest Cover Map 2013 and the National Forest Inventory stress the need for NCA for better-informed policy decisions. Costa Rica has made significant investment in the past two

decades to stop and revert deforestation and to recover its forest assets. The combination of public policy and private actions have contributed to creating a national forest capital that is not being valuated and accounted for in macroeconomic indicators. Moreover, the economic valuation of ecosystem services provided by forests has been widely studied in academic literature but not integrated into policy.

4| Project Development

4.1| Phase I Activities (2012-2013)

During Phase I (2012–2013) of the WAVES program, several activities took place:

1. The dialogue with leading agencies, including the Ministry of the Environment and Energy (MINAE), the Central Bank of Costa Rica (BCCR), the National Statistics Agency (INEC), the Ministry of Planning (MIDEPLAN) and the Ministry of Finance (MH), was a key part of the process, since environmental accounting was not previously part of the policy agenda. Discussions were centered on policy and technical issues, possible institutional arrangements, and the composition of steering and technical committees. Two technical workshops (May 2012 and December 2013) supported by the World Bank were the formal channels for WAVES discussion and conceptualization. In addition, meetings and conference calls with World Bank representatives and relevant organizations and stakeholders were organized during this period of time.
2. The elaboration of a scoping report based on a literature review and interviews with more than 50 experts from academia, government and private organizations served as an analytical base identifying possible natural assets accounts. As indicated before, an outcome from a WAVES-Costa Rica workshop (May 2012) was the selection of two accounts: water and forests.
3. Besides local events and meetings, WAVES promoted the participation of Costa Rican delegates in international activities. For instance, representatives from the Ministry of the Environment (MINAE) and the Central Bank (BCCR) participated in the Second WAVES Partnership Meeting in April 2012. A group of high-level officials attended the Third Partnership Meeting in April 2013. In addition, a Costa Rican delegation was involved in the 50:50 Campaign[10] at RIO+20 (in June 2012), with participation and support from President Laura Chinchilla regarding natural capital accounting initiatives. MINAE ratified the support to WAVES initiatives and stressed the relevance of environmental accounting for Costa Rica.
4. A discussion on the definition of the institutional structure to develop water accounting in the country took place in the final months of 2012. The creation of an inter-agency working group on water statistics was a key outcome of this process, following capacity building activities in November 2012. Since then, different tasks have been coordinated, including the updating of the inventory of water statistics, based on a deep review of available water balances and time series of relevant variables. This work is part of the activities to define the statistical data to be included in the National Information System for the Integrated Water Resources Management (SINIGIRH).
5. The formalization of the National Environmental Indicators System (SINIA) was supported and achieved in April 2013, with the goal of contributing to the creation of an official

[10] A World Bank Group-facilitated initiative that provides a unique opportunity for the public and private sectors to join forces, demonstrating on a global stage the importance of taking collective action in support of including natural capital in economic decisions or business operations.

integrated platform for environmental statistics in the country. SINIA is part of the National Statistics System (SEN) administered by INEC. WAVES work will focus on the components related to water and forests statistics. SINIA will integrate the required environmental information to complement the Central Bank´s (BCCR) databases and information structure used for the implementation of the System of National Accounts 2008. SINIA will be particularly relevant for the physical accounts development.

4.2| Institutional Arrangements

WAVES Costa Rica is led by a Steering Committee (SC), which was formalized in September 2013 and ratified by the new Administration in September 2014, and consisting of the Ministry of Planning (MIDEPLAN), the Ministry of Finance (MH), the Ministry of Environment and Energy (MINAE), the Central Bank of Costa Rica (BCCR), and the National Institute for Statistics and Census (INEC). The main tasks of the SC are:

i. Overall management and coordination;
ii. Work plan supervision;
iii. Budget elaboration and expenditure programming; and
iv. Validation of project outputs and institutional development of environmental accounting.

The SC members are high-level officers, namely the Vice-Ministers (MINAET, MH, and MIDEPLAN), General Manager (BCCR) and General Director (INEC), or their appointed representatives. They meet twice a year, and designate their organization's representatives and staff for permanent coordination with The World Bank, WAVES partners and inter-agency working groups. The SC will also define policy priorities in terms of specific requirements for the construction of the natural capital accounts.

4.3| Technical Committees

Two Technical Committees (TCs) on water and forests will work in coordination with the Steering Committee to develop the WAVES initiatives in Costa Rica. The TCs will be responsible for database and information management, statistics validation, and inter-agency technical work. The TCs will work in coordination with consultants, World Bank staff and the WAVES-Costa Rica project coordinator. The TCs will follow the inter-agency and coordination structure established by the National System of Environmental Indicators (SINIA). In this way, data quality, required staff time, and necessary working channels will be in place for environmental accounting work.

4.4| Project Coordination

The Central Bank of Costa Rica (BCCR) is the technical agency responsible for the compilation of natural capital accounts in Costa Rica. BCCR coordinates and articulates the process in the country, with support from the World Bank. However, the Ministry of the Environment (MINAE) is the lead political agency for NCA implementation. In addition, a Project Coordinator (PC) will work together with BCCR and the Steering and Technical Committees to support with the planning, drafting and implementation of activities for the compilation of natural asset accounts.

4.5| Phase II Activities: Work Plan (2013–2016)

The compilation of water and forests accounts started in 2014 and will continue until the end of 2016. A summarized work plan with main tasks is included in the Annex 1. This Plan will be subject to possible adjustments during the working and learning process.

5| Progress

The development of accounts is advancing according to the work plan. In addition to leading the environmental accounts work and implementing the SNA 2008, the BCCR is using a new input-output matrix and supply-use tables for the year 2012 to analyze water and forest statistics, as a starting point for developing natural asset accounts. The BCCR's main activities include data collection and analysis; data quality assessment; data gaps and limitations analysis; engagement with relevant primary data-producing organizations; and working sessions on SEEA 2012.

5.1| Water accounts

While information-gathering from government organizations is an ongoing process, preliminary water accounts have been compiled based on existing data and BCCR estimates. Sources used include water statistics from national accounts, hydrological balances, water use and pollution databases, and financial statements by water utilities. A case study from the ESPH—a regional water utility that, more than a decade ago, started a payment mechanism for protecting water resources—is under development. Water account modules and indicators will be completed in 2015 calendar year.

5.2| Forest accounts

Early results are available from forest accounts, incorporating physical and monetary values. BCCR representatives are coordinating with the National System of Conservation Areas (SINAC) and the National Forest Financing Fund (FONAFIFO) to analyze the findings from the new national forest inventory and a carbon dynamics study for REDD+. Results from this work will feed into the forest account's integrated modules.

6| Institutionalization

The Steering Committee has reviewed and begun implementing an updated technical work plan (2014–2016). The BCCR is leading the technical work of compiling the accounts through database development and information management, statistics validation, and inter-agency collaboration. MINAE is designing a policy to mainstream NCA into government's policy priorities for 2015–2018. The BCCR will complete their national accounts by the end of 2015, and then begin integrating environmental and economic statistics from the water and forest accounts.

The MH is starting its work with public environmental expenditures accounting, with the goal of improved estimation and monitoring of government expenditures in the country. In addition, the BCCR and MINAE are reviewing the possibility of compiling an energy account.

At the same time, relevant environmental law bills are under discussion in Congress (water, natural capital, climate change), with articles related to economic valuation of natural resources and its importance for policy decision making.

7| Outreach Efforts

- WAVES made a presentation at the GLOBE 2nd World Summit of Legislators, Mexico, based on contributions to the Costa Rica chapter in the second edition of the GLOBE Natural Capital Legislation Study, published in June 2014.

- San José, Costa Rica: WAVES Country Coordinator and BCCR representatives presented Costa Rica´s work on environmental accounts at the "Inter-regional capacity building workshop on REDD+ and Aichi Biodiversity Targets," on 29–31 August 2014 in San Jose. The Country Coordinator moderated the "Economics of Forest Restoration" roundtable.
- The WAVES Country Coordinator made a presentation on WAVES-Costa Rica at the 7th Annual Ecosystem Services Partnership (ESP) Conference on September 10, 2014.The working session was dedicated to SEEA Experimental Ecosystem Accounting.
- Costa Rica's work on NCA in national planning were addressed in the Estado de la Nación (State of the Nation) 2014 annual report, published in November 2014. A background paper on NCA for the "Harmony with Nature" chapter, included contributions from the WAVES Country Coordinator.
- A Water Accounting Regional Workshop took place on December 17–19 in San Jose, with the participation of more than 45 representatives from Statistics Offices, Ministries of the Environment, Planning, and government organizations working with NCA in 10 Latin American countries.
- MINAE and BCCR representatives participated in the first WAVES Knowledge Exchange Workshop on Ecosystem Accounting, on February 23–27, 2015 in the Philippines.
- Representatives from BCCR and from several government agencies participated in technical workshops on March 17–20, 2015, on the subject of ongoing work with historical data from land use change, for the development of Costa Rica´s REDD+ reference level. The spatial analysis of forest landscape change over the last two decades, as well as carbon flows and stocks, will be key inputs for forest accounts.
- Palo Alto, United States: Representatives from BCCR participated in the 2015 Natural Capital Symposium at Stanford University, on 23–25 March, 2015. The symposium gathered people from around the world who are working to factor the value of nature into policy decision-making.

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Work Plan (2013–2016)

Objectives and measures of success	Expected results	Expected outputs
NCA produced and reported on a regular basis in priority sectors	Water accounts and regular reporting roadmap developed (Physical asset accounts, physical and hybrid flow accounts, indicators)	Tables, indicators & database
		Technical Report
		Technical Report on case studies
	Forest accounts and regular reporting roadmap developed (Physical asset accounts, physical and hybrid flow accounts, indicators)	Tables, indicators & database
		Technical Report
Information and indicators inform decision-making in selected national or local policy or planning settings	Water policy informed	Policy briefing
		Snapshots and presentations
		Guidelines for water accounting compilation (second update)
	Forest policy informed	Policy briefing
		Snapshots and presentations
		Guidelines for water accounting compilation (second update)
	Global policies informed (potential to include energy and expenditure data in an accounting framework)	Roadmap
		Green growth report
		Natural Capital Sectoral Profiles Report
	A communication strategy is designed and implemented to inform the different stakeholders and these stakeholders start using the accounts.	Communication strategy
		Communication materials
		Cuntry Report (M&E Matrix)
		Quarterly Report
		Stakeholder involvement
	A critical mass of government officials are trained on the analytical potential of the accounts and their indicators.	National and international workshops

9| Annex

Annex 1. Costa Rica: Global Results-Based Monitoring Matrix – PDO 1

Objectives & Outcome (Results) Indicators	Base-Line June 2011	Prep year June 2012	Yr 1 Jun-13	Yr 2 Jun-14	Yr 3 Jun-15	Yr4 Jun-16	Yr5 Jun-17 (proposed)
PDO 1. To implement natural capital accounting in partner developing and developed countries							
Outcome Indicators:							
a. Country with a commitment to institutionalize natural capital accounting based on lessons learned from the WAVES program	None				Policy Incidence and Communications Strategy led by MINAE	TBD[b]	TBD[b]
Intermediate Outcomes Indicators							
11.1 Country has completed the milestones for the WAVES Preparation Phase[a]	None			All milestones achieved			
1.2 Country with asset accounts for selected natural assets	None			Preliminary national forest accounts	National forest accounts	Update existing accounts	Update existing accounts
1.3 Country with flow accounts for selected natural resources	None			Preliminary national water flow and forest product accounts.	National water flow accounts and forest product accounts; preliminary environmental expenditure account[b]	Updated water, forest accounts; monetary water accounts; environmental expenditure account	Update existing flow accounts

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Annex 1. Costa Rica: Global Results-Based Monitoring Matrix – PDO 1 (*continued*)

Objectives & Outcome (Results) Indicators	Base-Line June 2011	Prep year June 2012	Yr 1 Jun-13	Yr 2 Jun-14	Yr 3 Jun-15	Yr4 Jun-16	Yr5 Jun-17 (proposed)
1. Country with experimental ecosystem accounts	None						
1.5 Country with macroeconomic indicators based on NCA	None				Macroeconomic indicators developed	Update macro indicators	Update macro indicators
1.6 Country with capacity for maintaining NCA (evidenced by dedicated government staff for NCA and regular reporting mechanism for production of natural capital accounts)	None			(2 staff in Central Bank for NCA), TWGs for water, forest accts established and receiving training	Training continues through in-country, regional and other training workshops, and by working with int'l experts on the accts	Training continues through in-country, regional and other training workshops, and by working with int'l experts on the accts	Training continues through in-country, regional and other training workshops, and by working with int'l experts on the accts

[a] National Steering Committee (NSC) established, Feasibility study approved by NSC and WAVES Secretariat, Stakeholder consultation on draft work plan, Work plan approved by NSC and WAVES Secretariat.
[b] Some work plan actions for 2016 and 2017 are under discussion and design by the Steering Committee.

Annex 2. Costa Rica: Global Results-Based Monitoring Matrix – PDO 2

Objectives & Outcome (Results) Indicators	Base-Line June 2011	Prep year June 2012	Yr 1 Jun-13	Yr 2 Jun-14	Yr 3 Jun-15	Yr4 Jun-16	Yr5 Jun-17 (proposed)
PDO 2. To incorporate natural capital accounting in policy analysis and development planning in core implementing countries							
Outcome Indicators:							
a. NCA informs policy dialogue on growth, environment and poverty reduction, evidenced by citing NCA or using NCA indicators and data in, development plans, sector strategies and plans, executive orders, legislative documents, and the broader policy analysis literature (may include World Bank ESW, AAA and project formulation documents)	None			Legislation calling for NCA proposed to Congress	Follow-up on proposed legislation with the new govt.	TBD[a]	TBD[a]
Intermediate Outcomes Indicators							
2.1 Country has policy notes and analytical work based on NCA.	None			1st draft technical report on national forest and water accounts	Policy notes and technical reports on forest and water accounts, environmental expenditure account	Policy notes and technical reports on forest and water accounts, environmental expenditure account	TBD[a]

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Annex 2. Costa Rica: Global Results-Based Monitoring Matrix – PDO 2 *(continued)*

Objectives & Outcome (Results) Indicators	Base-Line June 2011	Prep year June 2012	Yr 1 Jun-13	Yr 2 Jun-14	Yr 3 Jun-15	Yr4 Jun-16	Yr5 Jun-17 (proposed)
2.2 Country with capacity for using NCA in policy dialogue (evidenced by government staff trained in using NCA)	None		SEEA Training workshop for 20+	3 staff attended UNSD-WB training in SEEA (Brazil), 2 attended Colombia workshop; 2-day training by int'l expert for 15+ policy-makers; Regional workshop on natural capital accounting (NCA) and water accounts with 40+ participants from the three WAVES core implementing countries and partner countries and organizations from Latin America.	Forest accounting workshop for 30+ people; Water accounting workshop for 30+ people; 1-week ecosystem accounting workshop for 30+ people	Regional and national training workshops, TBD	Regional and national training workshops, support from international experts

[a] Some work plan actions for 2016 and 2017 are under discussion and design by the Steering Committee.

Wealth Accounting and the Valuation of Ecosystem Services

Wealth Accounting and the Valuation of Ecosystem Services (WAVES) is a global partnership led by the World Bank that aims to promote sustainable development by ensuring that natural resources are mainstreamed in development planning and national economic accounts.

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