



IMPACT BRIEF

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Indonesia

Coastal Community Development Project (CCDP)

About the project

Objective. The Coastal Community Development Project (CCDP) was designed to reduce poverty and enhance sustainable and replicable economic growth among the economically active poor in coastal and small island communities in Indonesia through investments in capture fisheries, aquaculture, and related marketing and support structures.

Financing. The project cost of US\$43.2 million was jointly funded by IFAD, the Spanish Food Security Trust Fund, the Government of Indonesia (GoI) and project beneficiaries.

Timing. Project activities were implemented between January 2013 and December 2017.

The project's theory of change

The CCDP theory of change envisioned reducing poverty among economically active rural households in coastal communities of eastern Indonesia by increasing beneficiaries' household incomes through increased fish production and productivity (from aquaculture or capture fisheries) and related marketing and resource management activities.

To increase fish production and productivity, CCDP established formal fishers' and aquaculture groups and provided them with infrastructure, inputs, and training. Fishers' groups received **fishing gear and motorized engines** for their fishing boats, enabling them to fish farther off the coast and catch a more diverse, higher-value array of fish. CCDP linked beneficiaries to profitable markets by **setting up off-take contracts** and **memoranda of understanding (MOUs) with buyers** and **establishing fish-processing groups**, which primarily engaged women in fish processing and marketing. Infrastructure groups were created to construct, among other things, village information centers, fish smokehouses, processing warehouses, and marketplaces for fish and marine products. Additionally, the project provided cooler boxes to preserve fresh fish and reduce postharvest losses, and it offered support for food-safety certification. To ensure sustainability, marine diversity, and healthy fish stock in fishing grounds, CCDP supported the **designation of marine protection areas** and the implementation of **village-based integrated coastal management (ICM) plans**. These steps improved marine resource governance and management. They also helped rehabilitate reef and coastline resources, including through the planting of mangroves, which reduced coastline degradation and increased ecotourism.

Project outreach and outputs

Determining the overall impact of the project requires first understanding whom the project reached and what outputs it generated.

By project completion, CCDP had expended about 90 per cent of the project funds disbursed.

Total beneficiaries: **90,801**

Female beneficiaries: **27,240**

Village infrastructures constructed: **574**

Enterprise groups established and trained: **1,629**

Environmental management plans formulated: **180**

Project impact

As part of IFAD's Development Effectiveness Framework, CCDP has been subject to a rigorous impact assessment.

Data and methods

The impact assessment of CCDP employed a mixed-methods approach, using quantitative and qualitative survey data. A valid counterfactual group was established through both statistical methods and expert validation with project staff and stakeholders. The data used for analysis consisted of 1,049 CCDP treatment, 762 spillover, and 1,145 control households, plus a community-level data set of 90 villages across the 10 districts covered by the survey. Data analysis was performed using propensity score matching techniques – including inverse-probability weighting (IPW) and inverse-probability-weighted regression adjustment (IPWRA) estimation methods – to derive the magnitudes of CCDP's impact on several outcome variables of interest, including fish production and productivity, fish and marine product sales, income from fishing, and food security and nutrition.

Key impact estimates

CCDP was found to unequivocally increase fishing productivity and fish sales among the project beneficiaries, thus increasing their income from fishing. Other positive impacts of CCDP were recorded.



CCDP proved quite effective in improving fishing productivity, which rose by **79 per cent** (609 kg more fish per month per cubic meter of fishing boat), as well as in improving market access for fisher households (**28 per cent** more fish sales) through better market linkages and in reducing postharvest losses (–5 per cent). These improvements translated into increases of **43 per cent** in incomes from fishing and **33 per cent** in total income among CCDP beneficiaries engaged in fishing. Total net income from both fishing and nonfishing activities, however, declined by 17 per cent, because some of the comparison households engaged in more lucrative nonfishing activities.

In addition, CCDP was found to have empowered women (**27 per cent** increase) by engaging them in processing fish products such as smoked fish, fish balls, and packaged fish crackers and fritters. At the household level, CCDP beneficiaries were found to consume slightly more diverse diets (**6 per cent** increase), mainly because of an increase in their consumption of seafood and fish products.

Qualitative insights suggest that the marketing component was effective largely owing to CCDP's role as broker, to the beneficiaries' participation in fish auctions, and to the off-take contracts and relationships built over time between fishers' groups, processing groups, and traders. All of these activities were facilitated by CCDP.

Given the CCDP's community-based interventions to improve coastal resource management, the fishers were able to catch more and larger-sized fish in addition to a more diverse set of higher-value fish. This finding highlights the importance of integrating sustainable coastal resource management with efforts to increase fish productivity, thereby making the economic benefits from fishing sustainable.

A significant share (30 per cent) of beneficiary households had members engaged in nonfishing employment, which accounted for a sizable percentage of total household income. Thus, while the CCDP focused on fisheries, it could have invested in alternative economic activities in other sectors to enhance the impact on economic mobility (income and assets).

¹ Empowerment was measured in terms of women's participation in fish and marine product processing enterprises.

About the brief

This brief draws upon the findings of an IFAD-funded impact assessment of CCDP in Indonesia, which was prepared by Romina Cavatassi, Athur Mabiso and Peter Brückmann.

The impact assessment report on CCDP is available upon request.

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Lessons learned

- First, it is clear that **coupling technical capacity strengthening with investment in improved fishing gear, infrastructure, and inputs** (such as aquaculture stands, cages, motors for fishing boats, and landing sites) **increases fishing productivity**.
- **Deliberately integrating sustainable coastal resource governance and management is critical** because it not only helps increase fishing productivity and the value of fish sales, but also ensures the sustainability of these activities and generates positive spillover effects. In this case, ecotourism benefits emerged endogenously.
- Marketing support proved to be a lynchpin, **underscoring the importance of market considerations in fish and marine enterprise interventions, especially for women's empowerment**.
- Labor participation in **nonfishing activities, especially in the service sector, should be considered** an alternative, complementary area for investment in contexts where rural and structural transformation has **taken root**, as in Indonesia. The incomes of those who did not participate in CCDP but engaged in nonfishing activities were found to be higher than the incomes of CCDP fishers.
- It is important to carefully think through how to integrate resilience to a number of shocks, including climatic and geological shocks, in **shock-prone contexts such as the coastal communities** of Indonesia. Beneficiaries' asset wealth did not significantly increase, and some CCDP beneficiaries ended up leaving the fishing sector altogether after their boats were damaged by shocks.

