National Greening Program: Lessons from institutional analysis

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The National Greening Program (NGP) was established to address the deforestation and denudation of public lands. From a forest cover amounting to 92 percent of the total land area of the Philippines when it was first colonized in 1575, only 24 percent had remained as of 2003. The highest rates of deforestation happened during the Martial Law era.

Over 8 million hectares of denuded forest lands need to be rehabilitated in order to host more forests. A good percentage is occupied by forest dwellers, whether tenured under the Community-Based Management Program, or by indigenous peoples whose indigenous titles, though existent and recognized under law, have not yet been documented.

The executive order for the NGP was issued within eight months after the presidency of Benigno Aquino III began. The program targeted the planting of 1.5 billion trees in 1.5 million hectares until the end of President Aquino’s term in June 2016. If the target of 1.5 million hectares is met, and assuming that about 1 million hectares of denuded lands are not plantable as they are water bodies or rocky mountain faces, there would still be 5.5 million hectares left to rehabilitate after the NGP.

Deforestation has critical impacts not only on forest dwellers but on the entire country in terms of water availability, the local climate, biodiversity, and disaster resiliency.

This Policy Note is the result of an institutional analysis and process evaluation of the NGP. It considers the program’s environmental, social, and economic impacts.

PIDS Policy Notes are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

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While only three sites were visited (Sta. Cruz in Zambales, Hinoba-an in Negros Occidental, and Basilisa in Dinagat Islands), the experiences in the institutional aspect were representative enough to inform policy decisions that need to be made during the transition to a new administration.

**Defining the problem**

This institutional assessment seeks to define the policy environment within which the NGP operated, assess whether it served the ends of the NGP, and analyze if a subsequent NGP was needed and under what institutional arrangements. The question therefore is whether a subsequent reforestation/planting program was warranted after the NGP, how to sustain whatever gains were observed, and what the next steps should be to ensure that (1) the planted areas of 1.5 million hectares have a high long-term survival rate and (2) the rest of the 5.5 million hectares can be reforested at the most efficient and effective means with the least resources in the shortest possible time.

There is a definite urgency in ascertaining the policies to deliver these two goals. They would need to be in place or at least be ready at the soonest possible time in order to allow the next administration to allocate the necessary financial resources to implement a next NGP in 2017 and to ensure that the year 2016 is used to achieve the objectives of sustaining the gains and ensuring a ripe environment for a subsequent program.

The touted success of the NGP is a survival rate that is above the targeted 85 percent. Data show that this was achieved largely due to the efforts of the contractors and the implementers to replant any trees that did not survive. While ensuring a carpet bombing\(^1\) of seedlings across 1.5 million hectares, the survival rate of the replanted seedlings is not as high as that of seedlings that survived and were maintained for three years under the contracts. Younger replanted seedlings will therefore no longer be cared for after the three-year maintenance period stipulated in the contract. Nevertheless, such a carpet bombing of surviving trees as well as replanted trees constituted enough biomass and soil cover to have an impact on the microclimate and the water regime in the sites studied.

The policy goals for the next stage would have to be established to gain long-term sustainability of the program’s successes. Since large reforestation projects in the past have been successful in the short term but found to be unsustainable in the long term, ensuring that the benefits of such a huge national investment is a high priority. It would be important to consider that part of the success of the NGP is the inflow of funds to the areas planted, in terms of seedling purchase, transport spending, labor hiring, and purchase of other materials and supplies. These all result in higher income levels for the period of

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\(^1\) Carpet bombing, as used in this context, is the manner used to achieve the impact in every part of a selected area of land, in this case, a minimum of 50 hectares, in as little time as possible, with less regard to tree species vis-à-vis their specific contexts, communities, cultural, or ecological considerations, and focusing instead on numerical targets.
the contract. A sharp reduction in all of these inputs can cause setbacks in local incomes. In addition, changes in the ecosystem like more water as well as microclimate changes are important considerations in ensuring that the benefits will outweigh the income reduction when the program ends. Moreover, long-standing beliefs that new reforestation contracts can be awarded if the areas are denuded would need to be corrected so that contractors do not see any incentive or benefit to razing down areas to get a new contract.

The larger context is the absence of a forestry law that amends the outmoded Presidential Decree (PD) 705 issued over 40 years ago. This law is no longer consistent with the community-based approaches engendered by Executive Order 263 nor the constitutionally mandated means to access public goods, which no longer allows private commercial exploitation through a license. PD 705 also assumes the presence of large tracts of harvestable forests, which is now far from the reality. A Sustainable Forest Management (SFM) bill has been languishing in the past several Congresses. To support a new NGP, the SFM bill—containing the following elements—should be passed:

- Drawing the final forest line as required by the Constitution, classifying them into production and protection forests.
- Reorganizing the bureaucracy to make forest generation and protection the primary mandate of the Forest Management Bureau (FMB), while the protection of virgin forests and protected areas should be handled by the Biodiversity Management Bureau (BMB).
- Ensuring policy stability by limiting administrative rule-making power to exercise discretion over extraction and harvest of natural forest resources.
- Cementing the place of community-based forestry and comprehensively outlining the roles and duties that local government units (LGUs) must perform therein, including the Department of Environment and Natural Resources’ (DENR’s) extension duties to assist LGUs in the performance of those duties.

Establishing goals and strategies of a subsequent program

The new design of a subsequent program would need to diversify methods based on scale, existing forest cover, and implementer’s motivations.

The proposed elements of a revised NGP are the following:

- A program document with budgetary allocation circulated widely for inputs and comments.
- An administrative order from the DENR enshrining the program in the rules and regulations and setting a system of incentives and disincentives for failure to reach targets.
- An executive order from Malacañang reorganizing, yet again, the FMB and the BMB and placing the subsequent NGP under the Cabinet Cluster on Climate Change unless this is already reflected in the SFM bill.
• Appointing more personnel and enlivening the DENR internal ombudsman to allow him/her to deal with the complaints filed for acts done within the NGP immediately and fairly.

Specifically, the goals of a subsequent program should be to ensure the survival of a large percentage of the trees planted. Measures that can be considered include: having a site management plan; protection against fire, cutting, and other threats; interspersing with native and high-value trees; and ensuring a policy environment that will guarantee contractors and communities the enjoyment of the fruits of their investment in rehabilitation and protection efforts. As such, follow-up contracts for minimal maintenance and enrichment planting can be awarded to the same groups that undertook the original contract if they qualify and if they have no record of fraudulent practices. This will ensure ownership and continuity of the program’s gains.

Any future commodity map must increase the proportion of native fast-growing trees, interspersed, depending on species and appropriateness, with timber species in order to avoid the pitfalls of monoculture and ensure that the beneficiaries are not reliant on single crops that may or may not remain in large demand when the trees are grown.

Depending on resources, more denuded public lands should be covered. Additionally, secondary forests—where assisted natural regeneration can be undertaken or areas can be awarded as reforestation projects to public and private institutions—can expand the coverage over the 5.5 million hectares remaining to be rehabilitated. This can be done while protecting the remaining stands of natural forest from which seeding and wildling expansion in adjacent sparsely vegetated lands can come with less assistance than required in completely denuded areas.

These goals will not only address the issue of denudation but also provide incentivized efforts at reforestation and thus will give more benefits than the traditional cultivation through slash and burn. Adjacent communities experiencing ecological benefits and environmental services from the increased biomass can also take ownership and start investing their own resources through payments for environmental services or local government investments.

These efforts should continue to take full advantage of more targeted social mobilization and a convergence approach that gives more strategic roles to the competencies and expertise of each agency. For example, instead of assigning the replanting to the military, its contribution could be to watch over protected natural forests.

Furthermore, lessons from recent literature should be incorporated in the planning, such as finding the right mix of native and introduced species that have direct uses for the program participants and have higher success rates than monocropping. Infrastructure, in terms of road access, is detrimental for natural
standing forests but necessary for denuded areas that need to be reached by planters and those involved in maintenance efforts.

The institutional arrangements for such a program can be undertaken under a transitioning FMB. The transition should be toward a bureaucracy with a specific reforestation and forest protection mandate rather than an extraction and regulatory bureau. It needs to be a line bureau that will take care of all production forests and ensure a sharp, targeted, and comprehensive forest protection program. It should be competent in dispute resolution, organizing, and efficient technology transfer. These can then be under the close monitoring of the Cabinet Cluster on Climate Change. Protection forests and forests in protected areas should then be handed over to the BMB.

As a corollary policy direction, the cases filed by the defrauded parties in contracts under the NGP should thoroughly be investigated with speed, efficiency, and fairness. The complainants put themselves on the line in coming out with complaints. It is a unique opportunity to allow DENR, which has tens of thousands of personnel, to start cleaning up its house.

Smaller-scale reforestation using smaller contracts, with families or peoples and nongovernment organizations over smaller parcels of denuded lands, can still be undertaken but as a supplemental program that local governments can do to ensure that areas covered by the NGP and subsequent national programs are surrounded by other smaller initiatives.

An interagency agreement can be hammered out in a dialogue where agencies are presented with the challenges faced by the NGP and asked what their more strategic role should be in meeting those challenges. More likely than not, the responses would not be to merely cover more areas doing the same thing but in developing measures that add to the success rate based on each agency’s core competencies.

Lastly, the digital infrastructure built under the NGP should be taken full advantage of and the resulting data and geotagging analyzed further and updated periodically. Digital media would also have to be taken advantage of for mapping, public buy-in, crowd-sourced strategies and methods, and transparency.
Other policy options
Because the NGP was touted a success, there is a danger of merely replicating it. Government may consider adopting a policy that would institute the same program covering the remaining 5.5 million hectares of denuded lands and using a commodity map similar to the one used in 2013–2016. However, this may be not be the best approach; it will almost certainly face the reversal of the gains of the first NGP if no efforts are undertaken to continue to support the communities that hosted the NGP sites. Furthermore, with the increased biomass and microclimate changes in the NGP sites, it is reasonable to suppose that with added forest protection measures for nearby natural forests, natural as well as self-propelled regeneration by communities can already start to take place thereby making the investment to the same sites considerably lower. The counterpart contributions of people realizing the benefits of their previous efforts will be sufficient as long as the direction of the subsequent efforts are clear in the rules.

Therefore, reforestation using the same method may no longer be as necessary considering that (1) people seeing and feeling the ecological benefits such as the microclimate may undertake the planting on their own; (2) sufficient protection of denuded lands from agricultural expansion, settlement, or fire will allow new forests to grow through natural means; and (3) if cared for, people will start feeling more benefits in time and engender more, and more uptake from outside government or in local governments.

If the law is not changed, a subsequent program might still work with an executive order detailing the shifts in mandate of the FMB and the takeover of the BMB of protected forests.

Other alternatives, such as repeats of the Forestry Sector Projects I and II (funded with loans from the Asian Development Bank of USD 120 million and USD 440 million, respectively), are also not recommended considering the lack of proof of their long-term success and benefits, and the pressure to pay off the loans. Not only is the loan aspect detrimental; the experimentation on smaller-scale contracts without the necessary community organizing is another issue and as relayed by the DENR itself, the span of control is too wide. Hence, an alternative to this is a memorandum by the Department of the Interior and Local Government to local executives that details the opportunities for smaller-scale reforestation and an extension service of the FMB to assist them in undertaking such tasks.