



National
**FARM-TO-MARKET
ROADS**
Network Plan
(2023-2028)





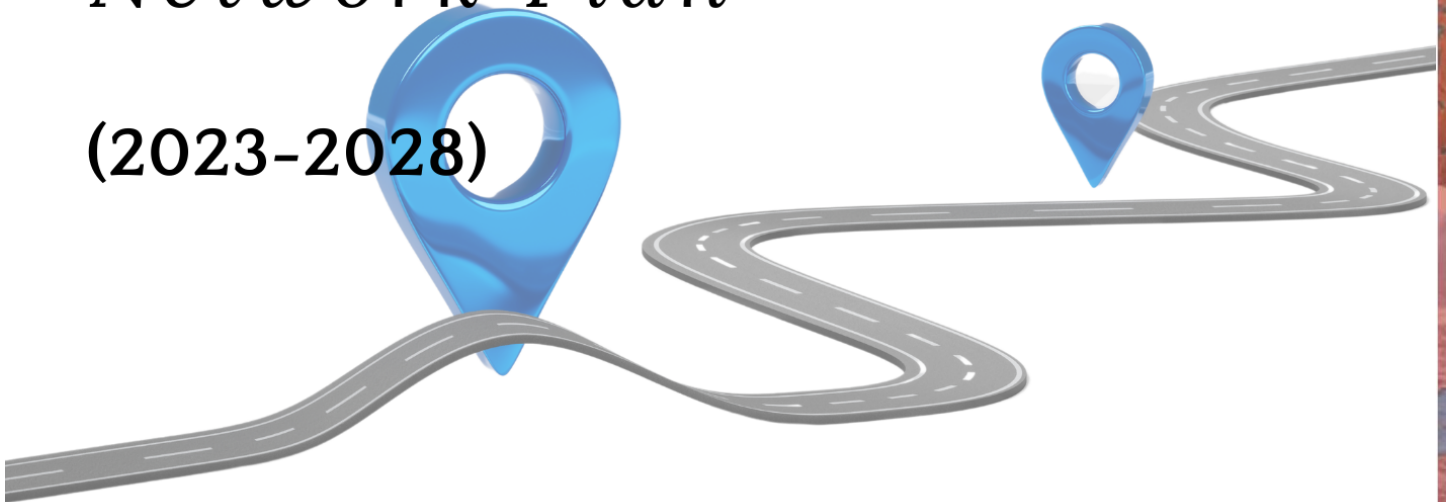
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...“gagawa tayo
National Network ng
Farm-to-Market Roads
para mas mabilis
na mailakbay ng mga
magsasaka ang
kanilang mga produkto
sa pamilihan”...

His Excellency Ferdinand
"Bongbong" R. Marcos Jr. President
of the Republic of the Philippines
and Secretary of Department of
Agriculture



National
FARM-TO-MARKET ROADS
Network Plan
(2023-2028)





MALACAÑAN PALACE
MANILA

MESSAGE

My warmest greetings to the **Department of Agriculture** as you publish the **National Network of Farm-To-Market Roads (FMR) Development Plan 2023-2028**.

Agriculture is vital to our country's overall development, which is why, it is my firm belief that we must build better and more farm-to-market roads that will establish interconnectivity and improve the delivery of goods to our markets.

I thus commend the efforts of the department as well as other government agencies who collaborate closely for the completion of this important roadmap for the future of the industry. This plan shall serve as our guidepost in the implementation of our key strategies that will allow unimpeded movement of farm and fisheries produce from farm to market and, more importantly, to the tables of our fellow Filipinos.

It is my hope that the FMRs will be the culmination of our promise to our farmers and fisherfolks—the promise of enhancing their productivity and making their lands sustainable and competitive. Be assured of this government's efforts in protecting and promoting the welfare of our farmers and their families.

With a well-thought-out FMR Development Plan and with the help and cooperation of every sector of our society, I am confident that we will swiftly traverse the path towards eradicating hunger, ending poverty and attaining food security in the Philippines. Together, let us all aim for a more bountiful and promising future for our country.

Mabuhay tayong lahat!




FERDINAND R. MARCOS JR.

MANILA
February 2023

THE PRESIDENT OF THE PHILIPPINES



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
CENTRAL OFFICE

MESSAGE

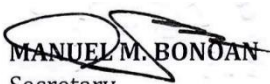
Over the years, the Department of Public Works and Highways, in partnership with the Department of Agriculture, has implemented a total of 18,794 lane kilometers of Farm-to-Market roads (FMRs) to connect farming and fishing communities to markets and make it easier for goods to be transported from producers to consumers.



DPWH believes that the farm-to-market road program of the DA is the backbone of the agricultural sector, to accelerate the livelihoods of our farmers and fisherfolks. This is also one of the priorities of our President Ferdinand R. Marcos Jr. during his State of the Nation Address last July. He highlighted the importance of the agricultural sector in stimulating growth and employment in the country.

The Department of Agriculture's "National Network of Farm-to-Market Roads Development Plan 2023-2028" envisions a five-year investment program on the improvement of agricultural infrastructure that supports sustainable agriculture in the Philippines. It will also provide the users and readers with an overview and guidelines on how the Farm-to-Market Roads Development Program will be implemented, maintained, and monitored.

As the state's engineering and construction arm, the DPWH, together with the sixteen (16) Regional Offices and one hundred and ninety-one (191) District Engineering Offices, will be in full support of this program for the development, modernization, and mechanization of Philippine agriculture.


MANUEL M. BONOAN
Secretary



Republic of the Philippines
DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT
DILG NAPOLCOM Center, EDSA corner Quezon Avenue, West Triangle, Quezon City

MESSAGE

Congratulations to the Department of Agriculture (DA) for the production of this *National Network of Farm-to-Market Roads Development Plan 2023-2028* as the government's guide in bolstering food security and ensuring stable prices of goods and services in the country!

The creation of FMRs is critical to the growth and development of the Philippine economy as they connect food producers to the market, give people access to social and basic services, and empower rural barangays.



This plan will ensure that FMRs are interconnected with other infrastructure projects to bring farmers and fisherfolks closer to the consumers while utilizing technology to facilitate smart agriculture and thereby addressing the supply chain challenges as directed by President Ferdinand R. Marcos, Jr. in his first State of the Nation Address (SONA).

Through the years, the DILG has been a strong partner of the DA in pursuit of its mission to ensure food security in the country through support interventions for local government units (LGUs) in road sector management.

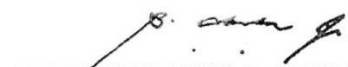
The DILG continues to implement various programs, projects, and activities in line with this goal such as the assistance program Local Government Support Fund - Support to Barangay Development Program (LGSF-SBDP); and the development and continuous update of the Local Roads Network Development Plan (LRNDP) for sustainable development, establishment, and maintenance of local roads database, which contains an inventory of municipal, barangay, provincial, and city roads all over the country.

It fills me with pride that the DILG contributed to the conception of this important project specifically in assessing the status of roads in agricultural and fishery production areas, coastal landing sites, postharvest facilities, and markets as well as providing maps of local road conditions under the LRNDP. I thank the LGUs and DILG Regional and Field Offices for their effort in delivering these outputs.

This Development Plan will act as a blueprint for national and local governments to assuring the financial and operational sustainability of FMRs within the next five years in the wake of the implementation of full devolution under Executive Order No. 138, series of 2021 consistent with the implementation of the Supreme Court's Mandanas-Garcia ruling.

Rest assured that the DILG will continue to support all initiatives of the DA and look forward to more areas of collaboration to provide more opportunities for LGUs and help attain the Marcos administration's 8-Point Socioeconomic Agenda, among which is protecting the public's purchasing power and mitigating socioeconomic impacts of the COVID-19 pandemic through food security for all Filipinos.

Kaisa po ninyo ang matino, mahusay at maaasahang DILG para sa maunlad na mga pamahalaang lokal at higit na pagyabong ng mga lokal na ekonomiya't agrikultura!


ATTY. BENJAMIN C. ABALOS, JR.
Secretary

MESSAGE



On behalf of the Department of Trade and Industry (DTI), I extend my sincerest congratulations to the Department of Agriculture (DA) for leading the implementation of the Farm-to-Market Roads Network Development Plan (FMRNDP) to ensure the accessible transportation of agricultural products straight to the market. This inter-agency initiative among the DA, Department of Interior and Local Government (DILG), Department of Public Works and Highways (DPWH), Department of Tourism (DOT), and DTI is aligned with the Presidential directive on ensuring food security in the country by connecting agricultural and fishery production areas to post-harvest facilities.

The formation of the FMRNDP will efficiently provide a list of systematic proposals and outlines the integrated connectivity of farm-to-market roads (FMRs), linking the local core road network from agri-fishery production areas, processing, and other agriculture-related infrastructure, trading posts, local markets, and agri-tourism sites to national highways. This plan is complementary with the Department's goal of directly connecting farmers' produce to local markets, enabling them to earn higher profits and ensuring that consumers will have access to affordable Basic Necessities and Prime Commodities (BNPCs).

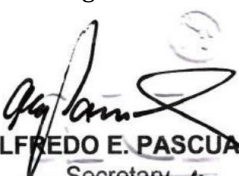
As the convenor of the Logistics Services Philippines (LSPH), DTI commits itself to assist the DA in the scanning and inventory of roads, ports, airports, consolidation areas, warehouses, trading posts, auction markets/bagsakan centers, wholesale markets, and processing plants. We also assure the DA of the Department's support for the establishment of a database through the Agricultural and Biosystems Engineering Management Information System (ABEMIS) and Geographic Information System for Agricultural and Fisheries Machinery and Infrastructure (GeoAgri), which coincides with our vision of ushering in digital transformation in the country that will make the monitoring of project Implementation faster and more seamless.

We at DTI commend the men and women of DA for spearheading FMRNDP, which is also consistent with DTI's goal of ensuring the unimpeded movement of cargo, reduce transport and logistics costs, and improve logistics efficiency. This will also create synergy within the country's agricultural sector to promote their fresh produce while fostering meaningful partnerships with other stakeholders and reaching wider markets.

More importantly, the FMRNDP will also complement DTI's agreement with the Department of Public Works and Highways (DPWH) for the implementation of the Logistics Efficiency and Transport Seamlessness to Enhance Agribusiness Trade (LETS EAT) and the Department of Transportation's (DOTr). logistics Efficiency and Transport Seamlessness for Growth Outcomes (LETS GO).

We assure you of the Department's unwavering support in this endeavor. Together, let us uplift the lives of Filipino farmers and contribute to the country's pursuit of food security. We look forward to our continued partnerships and collaborations in the near future.

Maraming Salamat at mabuhay!



ALFREDO E. PASCUAL
Secretary



Republic of the Philippines
DEPARTMENT OF TOURISM
IPO Building, 351 Sen. Gil J. Puyat Avenue, Bel-Air, Makati

MESSAGE

The Department of Tourism (DOT) expresses its utmost support and commitment to the Department of Agriculture (DA) and all the other partner agencies and local government units in implementing the National Network of Farm-to-Market Road Development Plan 2023-2028.

Under the Marcos Administration, tourism has been identified to serve as a major economic driver for inclusive growth. In line with the national efforts for infrastructure development, the DOT has supported the Department of Public Works and Highways and the DA in endorsing the development of roads leading to tourist destinations through the Tourism Road Infrastructure Program convergence project.



The formulation and implementation of the National Network of FMRP 2023-2028 are closely in line with the Department's three core strategies of Connectivity, Convenience, and E(quality), serving as fundamental elements of the National Tourism Development Plan 2023-2028.

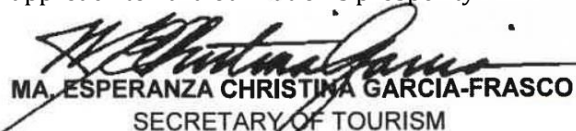
Connectivity ensures that tourist destinations and food sources are accessible through improved transportation networks and affordable travel costs. Enhancing access to farm tourism camps paves the way to linking small farm holders to establish networks to huge enterprises for business expansion. As such, the implementation of the National Network of FMRP 2023-2028 provides equal economic opportunity for local farmers and fisher folks who are part and parcel of the Philippine Tourism value chain.

Convenience aims to allow tourists and local communities to travel and experience tourism activities with ease. Tourism road projects further allow for the promotion of undiscovered tourist spots and potential farm tourism camps.

Moreover, the DOT espouses E(quality) by strengthening travel trade and tourism investment that prioritizes the diversification of the Philippines' tourism portfolio through the further enhancement of existing tourism products such as dive and marine sports tourism, education, health, and cruise tourism, food and gastronomy tourism, culture and heritage tourism, film tourism, and halal tourism practices, among others.

The National Network of FMR Development Plan 2023-2028 shall serve as a planning reference for tourism road development. Further, the Department supports this effort to acknowledge the relevance of the various stakeholders in the agriculture sector that greatly contributed to the circular economy that benefits tourism as a whole.

The Department looks forward to becoming an active and productive member of this inter-agency convergence even as we continue to express our wholehearted support for the Marcos Administration's approach toward our nation's prosperity.


MA. ESPERANZA CHRISTINA GARCIA-FRASCO
SECRETARY OF TOURISM

Preface

An essential component of modern agriculture is the efficient and effective infrastructure network such as farm-to-market-roads. With Bureau of Agricultural and Fisheries Engineering (BAFE) serving as the FMR Program Management Office (FMR-PMO), we are aiming to implement an inclusive, synergistic, and consultatory approach to the nationwide FMR network in all stages of its development — from identification, implementation, maintenance to monitoring — for the next five years.

President Ferdinand “Bongbong” Marcos Jr., during his first State of the Nation Address (SONA) last July 25, 2022, underscored the formulation of a National Network of FMRs that will link production areas to the markets. Regional, Island Groups, and National FMR Network Plans (FMRNP) were recently developed. This document aims to provide a high-level summary and an approach to guide the implementation and the review of previously developed plans.

Following President Marcos’ pronouncement on the agriculture sector’s “digital transformation,” the FMR-PMO will implement an FMR development program that will enable an intelligent, science-based decision-making process to prepare beneficiaries to embrace Smart Agriculture.

Agricultural and Biosystems Engineering Management Information System (ABEMIS) will start digital transformation and adoption of a science-based approach to FMR development. The FMR-PMO, together with its collaborating agencies and partners, will utilize a technical approach, following the basic principles of rural management and development, and mainstream ICT in FMR management, while constant and regular consultation will be conducted with its beneficiaries.

The identification of FMRs to develop will be highly consultative and will use a bottom-up approach. The recently concluded regional FMRNP planning-workshop introduced the use of the GeoAgri (www.GeoAgri.da.gov.ph) system to LGUs and to field Agriculture Officers who were given access to directly input their proposed FMRs to the system.

The FMR-PMO will use the data encoded in the GeoAgri system that are shared to the regional DA-RAED offices for validation as the main reference of project implementation. The ABEMIS will provide real time updates in terms of proposals but will still need enhancement in terms of the inclusion of submission of documents through the system. A platform that will capture the entire process from proposal submission to operations and maintenance is also needed to anticipate future road rehabilitations.

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LIST OF ACRONYMS

ABEMIS	Agricultural and Biosystems Engineering Management Information System
BAFE	Bureau of Agricultural and Fisheries Engineering
BSWM	Bureau of Soils and Water Management
CMGP	Conditional Matching Grant to Provinces
DA	Department of Agriculture
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
DEO	District Engineering Office
DILG	Department of the Interior and Local Government
DOF	Department of Finance
DOT	Department of Tourism
DOTr	Department of Transportation
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
DTP	Devolution Transition Plan
EU	European Union
FMR	Farm-to-Market Road
FMRDP	Farm-to-Market Road Development Program
FMRNP	Farm-to-Market Road Network Plan

GAA	General Appropriations Act
GIS	Geographic Information System
GOP	Government of the Philippines
IRA	Internal Revenue Allotment
JAO	Joint Administrative Order
JMC	Joint Memorandum Order
LRNDP	Local Road Network Development Plan
LGU	Local Government Unit
LRM	Local Roads Management
NAFMIP	National Agriculture and Fisheries Modernization and Industrialization Plan
NEDA	National Economic and Development Authority
NIA	National Irrigation Administration
NPAAAD	Network of Protected Areas for Agriculture and Agro-Industrial Development
NTA	National Tax Allocation
MC	Memorandum Circular
PCA	Philippine Coconut Authority
PDP	Philippine Development Plan
PIP	Public Investment Program
PER	Public Expenditure Review
PFM	Public Financial Management
PRDP	Philippine Rural Development Project
PMO	Program Management Office
PSA	Philippine Statistics Authority
RAED	Regional Agricultural Engineering Division
RBIS	Roads and Bridges Information System
RCSP	Retooled Community Support Program
RIA	Road Influence Area
SBDP	Support to the Barangay Development Program
SDG	Sustainable Development Goals
SAFDZ	Strategic Agricultural and Fishery Development Zones
SONA	State of the Nation Address
SRA	Sugar Regulatory Administration
TRIP	Three-Year Rolling Infrastructure Program
UMP	Unified Mapping Project
WB	World Bank

EXECUTIVE SUMMARY

President Ferdinand Marcos Jr., in his July 2022 SONA, said that his administration will prepare a farm-to-market road (FMR) masterplan to ensure food security in the Philippines. This plan, a prelude to a more detailed and longer-term masterplan, aims to lay the foundation and present an integrated baseline data. It is the result of collaborative efforts between and among all FMR implementing agencies or those that also plan, fund, and implement roads network that also passes through the agricultural production areas and support the establishment of a national network of FMRs.

In his State of the Nation Address (SONA), the president also mentioned and emphasized the need for the government to pursue “digital transformation” to keep up with the rest of the world, address the needs of the younger generation, and adopt efficient and effective ways of doing business and serving the public.

Based on the combined data of all FMR implementing agencies, previous administrations were able to build 67,255.46 kms of FMR from the required 131,410.66 kms. This gives the Marcos administration 64,155.20 kms more of road to construct and 78,157 kms of unpaved, bad, and poor roads to be rehabilitated across the country. Data show the need to address the FMRs’ lifecycle of proper identification, planning, construction, and maintenance to ensure a convenient way of transporting agricultural produce.

Existing policies and laws have been presented in this paper to provide a legal perspective of the plan.

This document also reviews all previously developed DA plans and considers all previously identified challenges to formulate a strategic framework, define strategies, programs, and projects in line with the president’s pronouncement on FMR development and digital transformation.

To address everything within the next five (5) years and to ensure financial and operational sustainability of FMRs considering the implementation of the Mandanas-Garcia ruling, this plan is proposing to build “Smart FMRs” that will not only provide a road, but a smart road that will have built-in conduits that can install/carry fiber optic cables, among others, to bring internet connectivity to rural areas. The internet will enable “smart agriculture” that will bring more market opportunities to farmers and fisherfolk, and allied services to the entire community.

The Smart FMRs will provide business opportunities for LGUs by renting out units or holes of the conduit, thus also enabling micro-telcos to do business locally. This will financially sustain the maintenance of FMRs, avoiding continuous burden to the national budget.

While FMR proposals are gathered bottoms-up, a more technical approach to rural development using ICT technologies and regional planning guidelines is proposed. This is to ensure a more efficient, effective, and well-agritectured FMR network. A well-studied and properly implemented road project should be economical, should ease mobility, and reduce accidents.

This plan recommends additional policies to mandate cooperation between and among all FMR implementing agencies, the enhancement of ABEMIS into a portal that will serve all internal users as well as a window for the public, structural improvement of the FMRDP PMO, and other programmatic recommendations.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Farm-to-market roads (FMRs) connect agricultural and fisheries production areas to markets, and post-harvest facilities, allowing producers to transport goods to traders and consumers with relative ease.

The Department of Agriculture (DA) is the main agency of the Philippine Government responsible for undertaking various agri-fisheries infrastructure projects, such as the construction, restoration, and rehabilitation of irrigation systems, post-harvest and marketing facilities. The department also co-implements with the Department of Public Works and Highways (DPWH) in the implementation of FMR projects. DA is also tasked to provide better facilities to farmers and fisherfolk. A special provision in the General Appropriations Act (GAA) of 2023 tasks the DA through BAFE to develop FMRs that must lead to arterial or secondary roads¹ and key production areas to facilitate the transport needs of farmers and fisherfolk.

The development of FMRs aims to serve the farming and fishing communities to facilitate trade, comfort and better opportunities not just for their livelihood but as well as their children's education and access to social services. A road provides access, and this opens a lot of possibilities for allied services for the beneficiaries.

President Marcos Jr., during his first State of the Nation Address (SONA) on July 25, 2022, directed DA to come up with a National Network of FMRs that will link production areas to the markets. Regional, Island Groups, and the National FMR Network Plans (FMRNP) were recently developed, and this document aims to provide a high-level summary and approach to guide the implementation and review of previously developed plans.

Following this directive of the president - the DA, DPWH, Department of the Interior and Local Government (DILG), Department of Trade and Industry (DTI) and Department of Tourism (DOT) issued a Joint Administrative Order (JAO) on the formulation, implementation and updating of the National Network of Farm-to-Market Roads. The JAO covers the following:

- Establishment and maintenance of FMR common database through the Agricultural and Biosystems Engineering Management Information System (ABEMIS) and Geographic Information System for Agricultural and Fisheries Machinery and Infrastructure (GeoAgri);
- Formulation and updating of Farm-to-Market Road Network Plan (FMRNP) at the national and local levels (regional, provincial, city, and municipal); and
- Formulation and updating of national and local FMR network investment plans.

The GeoAgri, a microservice of the bigger ABEMIS system provides real-time information on all data and information related to FMR development. The plan updating will include results of the implementation and all M&E activities undertaken, operational strategies that needs to be reviewed and updated, implementing policies, budget requirements and others as defined by our beneficiary stakeholders.

¹ As provided in GAA 2022 Special Provision

1.2 POLICY DIRECTIONS

The following policy pronouncements serve as the guiding principles in designing and in implementing FMR development projects. This will ensure that all initiatives are anchored on a higher goal and activities are complementary to maximize funds and benefits for target beneficiaries.

Sustainable Development Goals (SDG) Goal #1: No Poverty and Goal #2: Zero Hunger, to eradicate extreme poverty and hunger, will benefit most from a well-implemented and maintained FMR because produce will reach the market efficiently and economically. These have been the previous administrations' targets and will continue to be the focus of any administration.

Ambisyon Natin 2040 lays down the development goals of the Philippines where it supports a Matatag, Maginhawa at Panatag na Buhay Para sa Filipino. Under the Maginhawa pillar, it is envisioned that Filipino families will live in comfortable homes with the desired amenities and secure tenure. Families and friends are within reach of each other because transport is convenient and affordable, and people can take a vacation together within the country and abroad. Children will also receive quality education to qualify for decent jobs and/or gain skills to become agri-entrepreneurs. A sustainable income will eventually realize their full potential to become productive members of society.

In particular the **8-Point Socio-economic Agenda**, among the current administration's priorities, include protecting the purchasing power of families by ensuring food security; and reducing transport, logistics costs and energy costs; creating more jobs by promoting investments; improving infrastructure; and ensuring energy security, among others.

Philippine Development Plan (PDP) 2023-2028 Chapter 5 defines the challenges in modernizing agriculture and agribusiness due to inadequate infrastructures, including FMRs. High logistics, marketing costs, and huge postharvest losses must be addressed immediately for DA to achieve its goal of food sufficiency. This administration must address the FMR Development and Acceleration Program by elevating it into a legislative agenda.

Public Investment Program (PIP), a six-year programming list and one of the accompanying documents to the PDP, contains priority programs, activities, and projects (PAPs) to be implemented by government agencies within the medium term. As such, the PAPs in FMR Development Plan have to be submitted by the concerned agencies for inclusion in their PIP.

Three-Year Rolling Infrastructure Program (TRIP), a subset of PIP, is a main feature of the budgetary reform used to strengthen the link between planning and budgeting of all infrastructure PAPs of the government. The respective PAPs that meet the approved criteria should be included in the TRIP.

National Transport Policy, 2018. Section 8: Collaboration and Resource Sharing Between the National and Local Government, states that the Department of Transportation (DOTr), DPWH, and DA, in coordination with the Department of Finance (DOF) and Department of Budget and Management (DBM), shall set aside resources for local transport initiatives, including but not limited to the construction, improvement, and rehabilitation of intermodal transportation such as rail, airports, seaports, greenways, non-motorized transport facilities, terminals, depots, FMRs, road to roll-on, roll-off (RORO) terminals, social ports and agriculture-related airports and ports including their access roads, as well as road connectivity to tourism, trade and industry centers, and other local roads, to the extent allowed by existing laws, rules, and regulations.

National Agriculture and Fisheries Modernization and Industrialization Plan (NAFMIP), 2021-2030. What is common among the various modalities of intervention to transform classic transport corridors into effective economic corridors that will work for the agri-fisheries sector is the need to design a holistic intervention that combines a smart mix of soft and hard instruments as well as orgware to reduce the cost of doing business in the area and facilitate start-up and operation of business ventures in these corridors. The hard interventions include infrastructural elements such as roads, ports, railways, airports, energy and telecommunications networks, dams, irrigation infrastructure, market centers, warehouses, dry ports, among others.

President Marcos in his **SONA of 2022** “reiterated the importance of farm-to-market roads to ease the transport and delivery of farm inputs and products from the farms to the trading centers. His administration will also focus on post-production and processing to add value to agricultural products to enable farmers to increase their income” (DA-AFID | 26 July 2022).

Likewise, the NEDA Board chaired by the President, approved the new list of **Infrastructure Flagship Projects (IFPs)** wherein Farm-to-Market Road Development Program (FMRDP) was included as a priority intervention within the medium term to hasten the development of the agriculture and fisheries sector.

DA Administrative Order No.16, series of 2020 (*Annex 5.9. This is for updating to align the provisions with the approved Joint Administrative Order No. 1, Series of 2023 among the DA, DPWH, DILG, DTI and DOT*) provides the general guidelines on the implementation of the FMR development program. It covers the procedures in the identification, validation, selection, prioritization, design, approval, and coordination arrangements with DPWH on the construction, rehabilitation and monitoring of FMRs to be implemented under the FMRDP.

DA-DPWH Joint Memorandum Circular (JMC) No. 5, series of 2020 defines the roles and responsibilities of the DA and DPWH in the implementation of FMR Development Program.

DILG Memorandum Circular (MC) No. 52, series of 2011 requires all governors, city and municipal mayors to submit their respective Local Road Inventory to DILG.

DILG MC No. 159, s. 2017 provides guidelines on the formulation of an integrated 5-year Local Road Network Development Plan (LRNDP) for the sustainable development and maintenance of local road networks.

DTI's Logistics Services Philippines (LSPH) Ten Commitments, a list of policy directions for the development of the logistics services sector wherein Commitment No. 9 of the Ten Commitments of the Logistics services sector, states that: “We shall continue to promote and encourage investments in infrastructure, in critical areas and strategic points in the country, both from the public and private sectors, which will further facilitate the logistics service sector’s ability to serve its customers. This includes development of a holistic and responsive transport network serving land, sea and air; supporting infrastructure such as container depots, storage facilities, and logistics hubs; and comprehensive ICT infrastructure systems that support the need for better visibility and trackability across the supply chain.”

1.3 LEGAL BASES

The following laws serve as the legal bases of all FMR related projects and activities. They are relevant to FMR development and presented in chronological order.

Title	Relevant Description
Republic Act (RA) 7160 Local Government Code of 1991	Enacted devolving responsibility on local road development to local government units, in particular the provincial, city/municipal, and maintenance of barangay roads. Section 17 mandates the LGUs to fund and implement the construction of provincial, city, and municipal roads, and to maintain barangay roads, if it includes FMRs.
RA 8435 Agriculture and Fisheries Modernization Act of 1997	mandates the DA to identify priority locations of FMRs, in coordination with the LGUs, farmers and fisherfolk, and to formulate an Agriculture and Fisheries Modernization Plan.
RA 11524 Coconut Farmers and Industry Trust Fund Act	Section 4 states that programs relating to planting, replanting, fertilization, research and development, market promotion, and farm-to-market roads in coconut producing provinces, shall also be funded through regular appropriations.
RA 10601 Agricultural and Fisheries Mechanization Law of 2013	Creates BAFE, which is tasked, among others, to “coordinate, oversee, and monitor the national planning and implementation of FMRs and other agri-fisheries infrastructure projects.”
RA 10654 Amended RA8550 or the Philippine Fisheries Code of 1998	Section 153(b) mandates DA, in cooperation with concerned agencies, to prioritize the construction of FMRs linking the fisheries production sites, coastal landing points and other post-harvest facilities to major market and arterial roads/highways
RA 10752 Right-of-Way Act of 2015	Aims to facilitate the acquisition of right-of-way sites or locations for national government infrastructure projects. Government may acquire real property “through donation, negotiated sale, expropriation, or any other mode of acquisition as provided by law.”
RA 10659 Sugarcane Industry Development Act of 2015	Section 7 states that Farm-to-Mill Roads – National Economic and Development Authority (NEDA), DA, DPWH, and concerned LGUs, shall include in their annual PIP the immediate construction and/or rehabilitation of farm-to-mill roads in key sugarcane producing provinces. The Sugar Regulatory Administration (SRA) shall prepare and submit to these agencies and LGUs, within six (6) months from the start of effectivity of this Act, a Farm-to-Mill Road Master Plan and priority farm-to-mill roads at the mill district as basis for the planning, programming and investment prioritization.

Title	Relevant Description
RA 10816 Farm Tourism Development Act of 2016	In support of RA 10816, the DPWH, DOTr, DA, and other infrastructure agencies shall include in their annual development plans and priority investment programs infrastructure projects and transportation programs to expand access to farm tourism camps. Likewise, the DOT and the DA shall coordinate with these agencies the infrastructure requirements of established and potential farm tourism camps as stated in the IRR of the said law, specifically under Rule II, Section 5 (G).

1.4 FMR RELATED PROGRAMS

The **Philippine Rural Development Project (PRDP)**, a World Bank loan started in 2013 augmented by a loan from the European Union, is a project designed to establish the government platform for a modern, climate-smart and market-oriented agri-fishery sector. PRDP will partner with the LGUs and the private sector in providing key infrastructure, facilities, technology, and information that will raise income, productivity, and competitiveness in the countryside.

The SRA is also implementing the **Farm-to-Mill Roads Program**, which aims to contribute to agriculture development by providing the key sugarcane-producing areas with roads and bridges that will connect the sugarcane farms to mills, distilleries and other processing facilities.

Conditional Matching Grant to Provinces (CMGP) (formerly KALSADA) is allocated for road repair, rehabilitation, and improvement. It is a program between DILG and DBM for Provincial Local Government Units (LGU) in response to the needed infrastructure support, as well as reforms in local roads management (LRM) and public financial management (PFM).

Assistance to Municipalities (AM) Program seeks to equitably assist all municipalities in the delivery of basic services by providing financial subsidy to municipalities for the implementation of their priority programs and projects.

The **Support to the Barangay Development Program (SBDP)** of the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC) aims to provide basic services to geographically isolated and disadvantaged communities previously influenced or threatened by communist terrorist groups. The SBDP includes the construction of FMR projects identified by the cleared barangays in the Retooled Community Support Program (RCSP) of the DILG.

The DTI is undertaking the **Roads Leveraging Linkages of Industry and Trade (ROLL IT) 2.0.- Logistics Efficiency and Transport Seamlessness to Enhance Agribusiness Trade (LETS EAT) Program**, a renewed and reformulated working arrangement between DTI and DPWH to jointly undertake the planning, budgeting, advocacy for legislation, identification, evaluation, prioritization, regulation, supervision, implementation, and monitoring & evaluation (M&E) of roads infrastructure projects that will enhance food security and logistics efficiency in the country.

Under the **Tourism Road Infrastructure Project (TRIP)**, the DOT and DPWH jointly identify, evaluate, prioritize, implement, and monitor tourism infrastructure in priority destination areas, including roads leading to DOT-accredited farm tourism sites in support of the goals and targets of the National Tourism Development Plan.

DAR's Convergence on Value Chain Enhancement for Rural Growth and Empowerment (ConVERGE), and Tulay ng Pangulo para sa Kaunlarang Pang-Agraryo (TPKP) projects also support the development of FMR.

As a result of the consultations conducted in support of this document, FMR and roads implementing agencies that may have FMR-related functions agree to provide updates of their road projects passing through agricultural production areas using the ABEMIS or GeoAgri System every June and December of the year. This will then be part of the progress report that FMR and roads implementing agencies will submit to the President.

1.5 THE FMR PROCESS AND THE RESPONSIBILITIES OF VARIOUS AGENCIES

FMR projects are implemented by various agencies, therefore, to provide a clearer delineation of tasks. The FMRDP – Program Management Office (PMO) adopted the Responsibility Assignment Matrix (RAM).

The table below provides a summary of the roles and responsibilities of all agencies and offices tasked to implement FMRs vis-a-vis the FMR development process. This approach aims to clarify everyone's role for ease of implementation and to guide whoever will review and evaluate the project.

Table 1: RACI Chart for FMR Project

Process	Responsibility Assignment Matrix ²			
	Responsible directly responsible for successfully completing a project task	Accountable final authority over the successful completion of the specific task or deliverable	Consulted someone with unique insights the team will consult	Informed a client or executive who isn't directly involved, but you should keep up to speed
Proposal	LGU	LCE	Councils and Associations	Residents
Validation geotagging	DA- Regional Agricultural Engineering Division (RAED) and FMRD-PMO	FMRD-PMO Head	LGU and Other Stakeholders	Beneficiaries
Prioritization, review and approval	FMRD-PMO	FMRD-PMO Head	DA- RAED and Office of the Secretary	LGUs
Preparation of the detailed engineering design and program of works	DPWH – District Engineering Office (DEO)	District Engineer	FMRD-PMO, DA- RAED and LGU	LGU and the Public thru the COA requirements of publication

² RAM is also called the Responsible, Accountable, Consulted, and Informed (RACI) matrix. Used commonly in software development and development-oriented projects to minimize the 'gray areas'. The PMBOK Guide 4th Edition defines RACI/RAM that is used to illustrate the connections between work packages or activities and project team members. On larger projects, RAM can be developed at various levels.

Process	Responsibility Assignment Matrix ²			
	Responsible directly responsible for successfully completing a project task	Accountable final authority over the successful completion of the specific task or deliverable	Consulted someone with unique insights the team will consult	Informed a client or executive who isn't directly involved, but you should keep up to speed
Construction of FMR	DPWH-DEO Contractor	District Engineer	FMRD-PMO and DA- RAED	LGU
Progress monitoring	DA-RAED and FMRDP-PMO	Contractor	DPWH-DEO	LGU, DA and DPWH Joint Monitoring Committee
Project turnover and acceptance	Contractor FMRDP-PMO	DPWH-DEO and DE	LGU	DA-RAED
Operation and maintenance	LGU	LCE	DA-RAED and DPWH-DEO	DA-DPWH Joint Monitoring Committee and FMRD-PMO

This table also shows the process adopted by DA FMRDP. However, the stakeholder's responsible, accountable, consulted, and informed may vary from program or projects depending on the sector being addressed. Other NGAs that also implement FMR projects may adopt the matrix as deemed necessary.

This table refers only to locally funded projects. Foreign assisted projects may draft their own RAM chart depending on their prescribed rules, processes, and terms and conditions.

CHAPTER 2: SITUATIONAL ANALYSIS

This chapter will provide an overview of the current situation of FMR development in the country, the planning process adopted in coming up with this plan, the challenges that need to be addressed, and the recently approved implementation of the Mandanas-Garcia ruling and its implications to FMR development, especially for lower class municipalities.

This section also provides authoritative data on the total FMR backlog vis-à-vis the country's total land area, road networks, and road density. The BAFE aggregates all data and information shared by other government agencies involved in FMR development to provide a comprehensive view of the total FMR initiatives in the country.

2.1 ROAD PROJECT INITIATIVES

The graph below represents the various FMR projects completed and funded by various national government agencies, namely – DOT, DTI and DA from 2018 to 2022. The FMR³ projects of DA were disaggregated to show the total kilometers implemented to FMR development

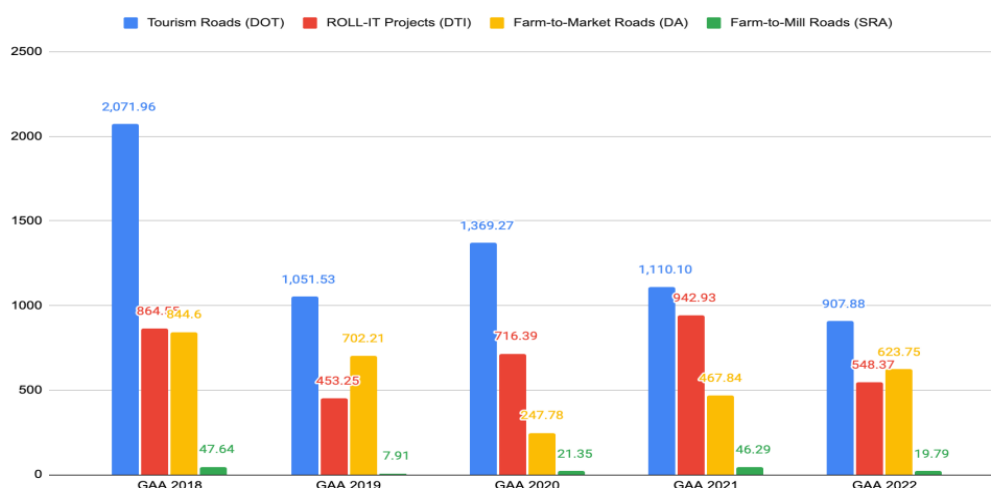


Figure 1: Implemented FMR (km) under GAA

Combined FMR projects of DA are lowest during the 2020 and 2021 fund year compared to the other agencies. These graphs were generated based on the budget allocated to the five (5) implementing agencies – DOT, DTI, DILG, LGU and DA.

Note that the road infrastructure program of DOT is consistently getting the highest allocation from 2018 to 2022 because tourism roads follow the national roads standards.

³ Farm to Market Road of DA also includes the Farm to Mill Road of DA-SRA

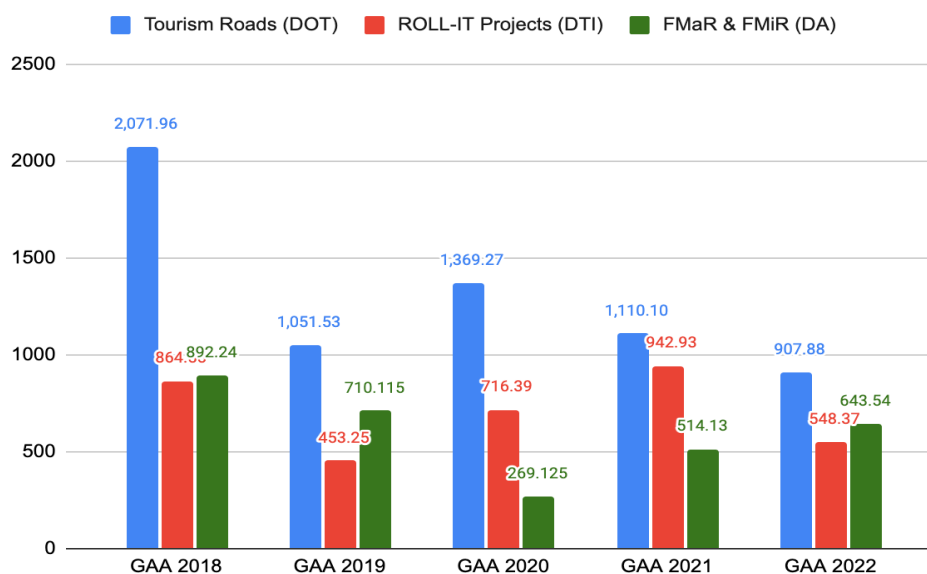


Figure 2: Implementation by fund allocation (NGAs)

Departments Implementing FMRs

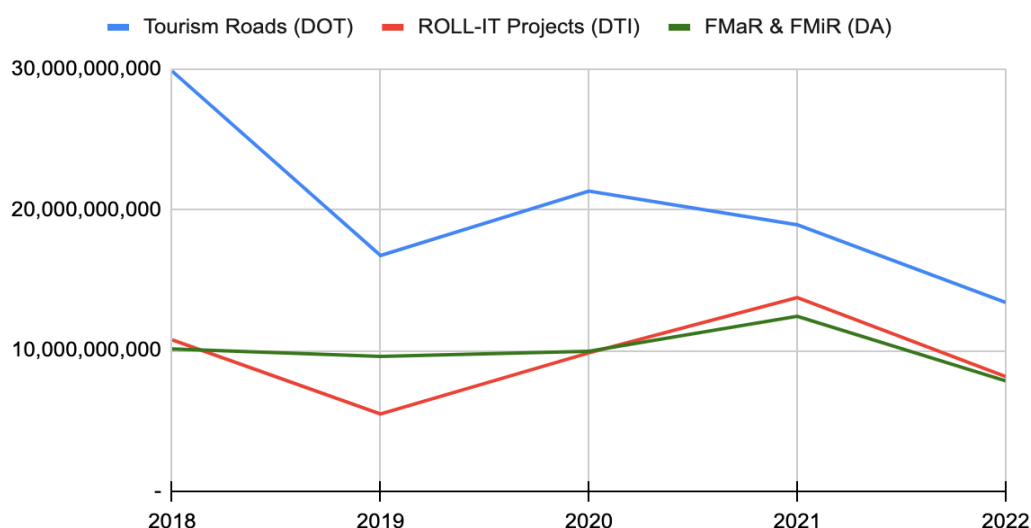


Figure 3: Implementation by fund allocation (NGAs)

The FMR budget being managed by three different agencies, each serving their respective mandates and implementing their own projects, is indicative of different goals and objectives. Other FMR projects of DA are:

- The World Bank (WB) and European Union (EU) funded PRDP, a six-year project designed to establish the government platform for a modern, climate-smart and market-oriented agri-fishery sector. This project aimed to build key infrastructure, facilities, technology, and information that will raise incomes, productivity, and competitiveness in the countryside. The WB has a total loan proceed of Php32,744,438,901.25, of which the Government of the Philippines (GOP) must provide a counterpart worth to Php4,186,025,535.36 and LGU counterpart of Php4,186,025,535.36, which aims to construct 2,615 kms of FMR and 2,060 linear meters of bridges. The EU-funded PRDP on

the other hand, aims to construct and rehabilitate selected FMRs in Mindanao. It has a total budget of Php31,807,130,301 and was able to complete 2,341.12 km of FMRs and 1.98 km of bridges.

- The Philippine Coconut Authority (PCA) also implements FMR projects under its Infrastructure Development Program; and the
- The National Irrigation Administration (NIA) implements its NIA Access roads.

Funding of the FMRDP Project is clearly not enough to cover all potential projects. Thus, the need to have an effective mechanism in prioritizing FMR projects that will lead to high economic and social return.

A consistent and significant decline in the share of FMR construction under the national road program has been found as the main issue arising in FMRDP. This decline is due to several factors such as – underutilization or failure to utilize FMR funds as shown in DPWH financial reports from 2016-2020, poor project prioritization, poor operations and maintenance and poor monitoring and evaluation of FMRDP.⁴ The underspending of FMR funds is due to the fragmented approach in managing the development of FMRs.

The table below is the summary of road status as reported by DPWH as of 2022, DILG's Roads and Bridges Information System (RBIS) and NAMRIA's Unified Mapping Project (UMP) 2020 will be used as basis of this plan.

Table 2: Summary of Road Status

Road Category	total km length	total paved (km)	percentage paved
National Road Network	33,119.57	32,527.40	98.20%
Local Roads	183,490.24	74,385.75	40.54%
Total Over-all Road Network (km)	216,609.81	106,913.15	49.35%

The Philippines has a total road network of 216,609.81 km and a road density⁵ of 0.696 km/sq.km. The overall-all paved road ratio is 0.493 with a paved road density of 0.344 km/sq.km (DPWH, 2022).

Majority of these are made up of local roads (183,490.24 km) accounting to 84.71% of the total road network. From these local roads, barangay roads (54.21%) are the country's main thoroughfares, particularly in rural areas.

The Philippine Statistics Authority (PSA) reports that 41,984 barangays (99.89%) have agricultural, aquaculture and fisheries facilities.

The magnitude of the backlogs for unpaved road networks in the country are the barangay roads. The DILG RBIS estimates the total barangay road is 117,417.35 km.

The remaining 78,809.35 km are unpaved barangay roads. NAMRIA's UMP identified 24,324.994 km of barangay roads in poor condition and 19,196.555km in bad surface roads

⁴ Various agencies are tasked to manage the FMR funds, however, road construction is solely assigned to DPWH, which in a way, defeats the purpose of fund allocation and accountability to the project.

⁵ Road density is the ratio of the length of the country's total road network to the country's land area. The road network includes all roads in the country: motorways, highways, main or national roads, secondary or regional roads, and other urban and rural roads. (<https://databank.worldbank.org/>)

with a total of 42,521 kms. Thus, leaving a huge backlog of FMRs to be upgraded and concreted to Portland Cement Concrete Pavement.⁶

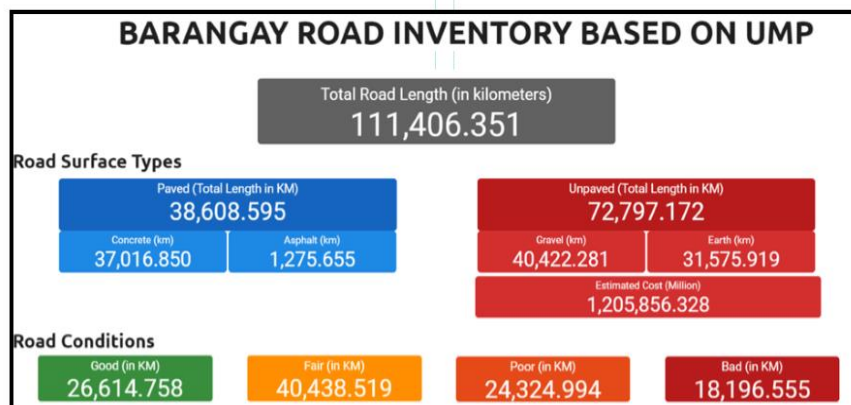


Figure 4: Inventory of Barangay Road based on UMP

Given this data, it is timely that the national government should focus on directing more allocation to upgrade the remaining 67% of barangay roads into PCCP FMRs as the other road classes will be prioritized by higher class LGUs with bigger budgetary support arising from the implementation of the Mandanas-Garcia Ruling. Moreover, the National Road network has already attained 98.20% paved status for the 33,119.57 km national road and highways (FMRDP Strategic Plan, 2022-2031).

The table and data above as baseline, were presented during the FMRNP regional development workshops. The GeoAgri system⁷ is developed using the revised “prioritization criteria” (see Annex 1.4 for details). This prioritization criteria were developed through research and studies and a series of discussions and consultations among participating agencies. This has also been presented to LGUs and Farmer and Fisherfolk Associations during the development of the Regional FMRNPs.

RA 8435 identified and delineated the Network of Protected Areas for Agriculture and Agro-Industrial Development (NPAAAD⁸) in 1998. NPAAAD, defines prime agricultural lands where soils, topography, and agro-climate are suitable for agriculture and fishery development.

The NPAAAD 2022 of the DA-Bureau of Soils and Water Management (DA-BSWM) maps the total agricultural production area at 14,455,172.61 hectares, including alluvial plain lands that are highly suitable for agriculture and fisheries production.

Following the FMRDP Policy Study of 2016, the FMR Road Influence Area (RIA) is 110 ha per kilometer of FMR, therefore the total required FMR in the Philippines is 131,410.66 kilometers to service all production areas. Considering the FMRs already completed by DA, DOT, DILG, DTI and DILG, the total backlog is still at 64,155.20 kilometers

⁶ [Portland Cement Concrete Rigid Pavement - PCCP Method](#) refers to the construction of a rigid pavement carriageway on the highway.

⁷ GeoAgri is a micro-service under ABEMIS developed to automate computation and ranking of proposed FMRs following the AO No. 16, Series of 2020 revised prioritization criteria. The criteria was normalized and standardized in order to arrive at a standard logic that any programming language can understand.

⁸ NPAAAD is a Geographic Information System (GIS) that aims to provide accurate land resources information as a basis for appropriate planning and policy formulation for sustainable agriculture and fishery development in lands suitable for crops and livestock production and aquaculture.

Table 3: NPAAAD & NAMRIA's road inventory

	Requirement (km)	Completed/paved (km)	Backlog (km)
Production area (NPAAAD)	131,410.66	67,255.46	64,155.20
NAMRIA's Road Inventory	111,406.51	38,608.60	78,157.13

The Strategic Agricultural and Fishery Development Zones (SAFDZ), on the other hand, refers to strategically located and accessible areas within the delineated NPAAAD, which are technically identified by DA through the BSWM and validated by the Local Government Units, to serve as areas that will showcase modern farming and fishing technologies.

SAFDZs are prime agricultural lands that are actively used for agricultural and fisheries production whose support facilities are available and strategically located to warrant full modernization of agriculture.

NPAAAD and SAFDZ are Geographic Information System (GIS) systems with databases that spatially account for the remaining suitable areas for agriculture, livestock, and fishery development. This serves as the spatial basis for the preservation of the remaining efficient agricultural land primarily for targeting higher and more comfortable levels of self-reliance in food commodities.

NPAAAD and SAFDZ aim to provide accurate land resources information as a basis for appropriate planning and policy formulation for sustainable agriculture and fishery development in lands suitable for crops and livestock production and aquaculture. Details and updates for the NPAAAD data can be accessed thru the BSWM website ([Maps | BSWM \(da.gov.ph\)](http://da.gov.ph)).

NAMRIA's UMP road inventory reports a total of 78,157 km that requires rehabilitation. The 44.3% unpaved barangay roads correspond to 34,635.45 km, 24,324.994 km as poor, representing 31%, and 19,196.555 km as bad roads.

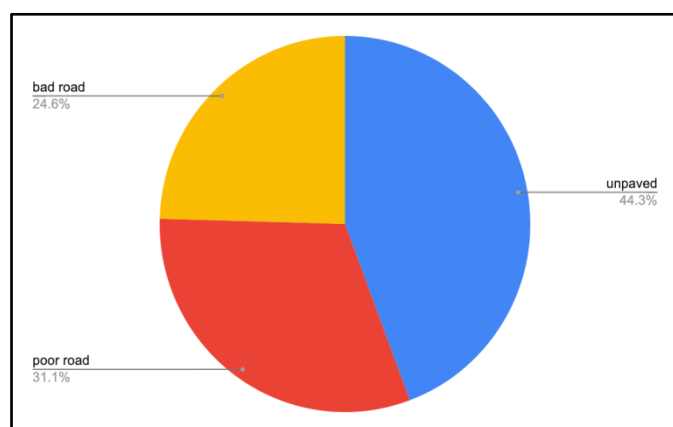


Figure 5. Road Condition based on NAMRIA

Following earlier discussions and based on data presented above, the remaining FMRs for development and management is 64,155 km including all other FMRs implemented by other DA agencies and other departments. The rehabilitation of 78,157 km should also be considered by other roads management implementing agencies to attain the desired mobility convenience.

2.2 PLANNING PROCESS ADOPTED

The identification of FMRs to develop is highly consultative and was done through a bottom-up approach. The recently concluded regional FMRNP planning, and workshops introduced the use of the GeoAgri system to all LGUs and field Agriculture Officers. They were

given access to directly input their proposed FMRs to the system. At the time of plan preparation, not all proposals were accommodated. However, the system was reopened, and everyone was advised to continue inputting their proposed FMRs. While this is a welcome development toward empowering the beneficiaries, there is also a possibility of misuse if not properly and technically guided.

The ABEMIS will start the digital transformation and adoption of a science-based approach to FMR development. BAFE, together with its collaborating agencies and partners, must provide a technical approach that will follow the basic principles of rural management and development, and the use of ICT in mainstreaming FMR management with constant and regular consultation with beneficiaries. It will be beneficial as well as aesthetically pleasing if scientifically proven road planning design guidelines can be adopted. This can be planned together with the LGU concern and all roads development agencies.

Therefore, BAFE, using the data encoded in the GeoAgri system shared to DA-RAEDs for validation, will be the main reference of project implementation. A map has already been laid out, but LGU partners need to complete all the mandatory requirements. Similarly, deadlines will be imposed because the project needs to undergo the usual bidding process.

The GeoAgri system will provide real time updates in terms of proposal status, but it still needs to be enhanced in terms of the inclusion of the submission of documents through the system, and a platform that will capture the entire process from proposal submission to operations and maintenance. Through this, future road rehabilitations can be anticipated.

2.3 FMRS UNDER MANDANAS RULING AND THE FINDINGS ON THE 2020 WORLD BANK REPORT ON FMR PUBLIC EXPENDITURE REVIEW

With the implementation of the Mandanas-Garcia ruling, the LGUs will receive a 40% increase in allotment from the national tax collected by the Bureau of Internal Revenue (BIR). What used to be the Internal Revenue Allotment (IRA) is now dubbed the National Tax Allocation (NTA). This development allows the LGUs to receive an additional of Php263.55 billion in 2022 amounting to Php959.04 billion compared to the Php695.49 billion that they received in 2021.

With this increase, the National Government considers transferring more responsibilities to the LGUs in administering and funding programs, projects, and activities.

The increase in responsibilities “may” become a problem at the local level as LGUs are now expected to provide a heavier array of services. Imbalances and lack of capability to meet the cost of delivering transferred services are foreseen.

Some of the assumptions gathered during the workshops are:

- FMRs may not be seen as priorities as evident in the LGU spending patterns, most of which are dedicated to general and social services; and
- LGUs have limited personnel and skills available in assuming the FMR-related tasks devolved, and an increase in staff will be needed to assume the tasks needed.

To help plan the implementation of the “Mandanas-Garcia” ruling of the Supreme Court, the WB was requested to carry out a rapid Public Expenditure Review (PER) focusing on the DA FMR Development Program.

This review of the WB aimed to:

- Analyze the appropriateness, efficiency, and effects of current spending on FMRs, as well as the potential impacts of the proposed devolution of the FMRDP.
- Examine how devolution could affect the overall fiscal outlook and strategies of the government, relative to spending on infrastructure and FMRs.
- Review FMR spending compared to other functions and services delivered by DA – the sources of funds, efficiency, and unintended effects due to the allocation of the FMR budget.
- While decision regarding the future of the FMRDP is the responsibility of DA, the findings, conclusions, and recommendations of this PER should be relevant to the LGUs to which more responsibilities may be devolved, the community of development partners, and civil society.

In order for the LGUs to be able to deliver the expected outcomes upon the transfer of responsibilities, WB sees the need for a continued capacity-building of LGU personnel to ensure an efficient implementation of FMRs and other infrastructure projects. A system of monitoring and enforcing compliance needs to be in place too.

To ensure sustainability, the operations and maintenance of FMRs should be included in the beneficiary LGU's Devolution Transition Plan (DTP) at the provincial, city, municipal and barangay levels, and this should form part of the prioritization criteria to ensure fund maximization. The FMR PMO must ensure the presence of the following:

- availability of skilled personnel who will do regular road assessment – physical and results of the FMR;
- availability of maintenance personnel;
- operations and maintenance plan, to reflect schedule and budget of major activities;
- rehabilitation plan, to reflect schedule and budget; and
- quarterly submission of reports and/or as needed to the FMR PMO

The main findings of the study are for DA to play a bigger role in FMR development as devolving it to the LGUs may result in underinvestment because LGUs are presumed to tend to prioritize spending for social services.

The DA should spearhead the planning, prioritization and monitoring activities. Efforts in developing the FMRNP should be reinforced.

2.4 CHALLENGES IN FMR NETWORK IN THE PHILIPPINES

This section summarizes the Problem Analysis conducted by the Don Mariano Marcos State University and the challenges gathered during the preparation of the Regional FMRNP conducted by the Caraga State University in 2021.

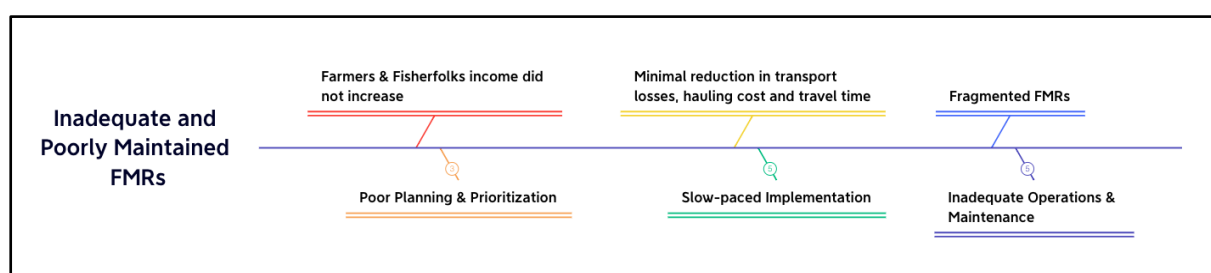


Figure 6: Problem tree analysis

The figure above shows that there are “inadequate and poorly maintained FMRs” due to poor planning and prioritization, slow-paced implementation, and inadequate operations and maintenance.

Poor planning was attributed to the absence of the national network of FMR masterplan, weak capacity of implementing agencies in enforcing the guidelines, and the minimal coordination among stakeholders from planning to maintenance. Delayed and unfinished FMR projects are also caused by changes in location, failure to legally obtain the road right of way, unliquidated fund transfers, the inability of the LGUs to provide the 10% equity, and other issues related to poor project preparation.

Slow-paced implementation was due to insufficient funds to complete the target length, delayed payment, and transfer of road right of way, weak coordination and poor monitoring between DA and DPWH from pre-implementation to operations, and the absence of a proclamation of FMR as part of the local road network.

Inadequate operations and maintenance were due to the absence of an interagency “operations and monitoring audit system,” LGUs not registering their completed FMRs in the Road Asset Registry, and the minimal adoption of a science-based approach to FMR management.

Because of this problem and its many causes, farmers and fisherfolk’s income are not increasing to meet the level of their needs; there is very minimal reduction in transport and hauling cost; and fragmented FMRs still affect the total travel time.

2.5 SUMMARY OF CHALLENGES CITED FROM THE NATIONAL FMRNP

The National FMRNP cites several challenges in every phase of development, namely in identifying an FMR, construction, turnover, operations and maintenance, and evaluation process as shown in the Table 4.

The sources of primary data and information for FMRNP are the LGUs, stakeholders, and other key players in FMR development. FMR proposals are initially identified at the barangay, municipal or city, and provincial levels. They are validated and prioritized based on the criteria prescribed in DA Administrative Order No. 16, Series of 2020.

Table 4: Issues Raised during the FMRNP Planning-Workshops

Category	Issues and Concerns
Data gathering	Scarcity of data and information during the gathering stage due to minimal participation of local communities, favoritism of barangays, difficulty in the acquisition of the road right-of-way, difficulty in producing the documentary requirements based on the different standards and guidelines prescribed by different funding agencies.
Physical location and technology	There is a lack of technological capability to properly geo-tag and identify FMRs. These are areas with remote interior, muddy roads, rivers and creek crossings, large puddles of water, dense vegetation and roads that traverse two or more municipalities. Projects that were implementing Item 206 (Polymer-based Soil Stabilizer) were experiencing delays because of the availability and price of the item.

Category	Issues and Concerns
DA AO No. 16, Series of 2020 criteria	Some identified FMRs do not have access to local farms and fishing communities but lead to production areas of private landowners with individual and personal interests. This is tricky, considering that the DA AO No. 16, s. 2020 grants higher points to bigger production sites without considering the number of owners. There is also a lack of investigation into proposed sites and political intervention.
People	Identification of some FMRs depends on the decision or priorities of the local chief executives. Major stakeholders (farmers and fishers) are neither consulted nor mobilized in project identification.
COVID-19 restrictions	Health protocols limit access and therefore affect the mobility of personnel involved in the data gathering and validation stage.
Road right-of-way	LGUs consider this a major problem during the construction of FMRs, especially when securing the road right-of-way in privately owned areas. DA's AO no. 16, 2020 recommends 4 meters in width, but if the average daily traffic (ADT) reaches 51-200 per day, then it can be upgraded to 5 meters, and if ADT is more than 201, then it should be 6.1 meters. Some landowners or farmers are hesitant to let go of their property, especially if it will cause uprooting their crops, especially if road shouldering is included.
Environment	There is a lack of available resources for regions with geographically isolated and displaced barangays, such as the availability of nearby water sources that will be used for construction. Moreover, inclement weather can cause time and schedule suspensions that affect delivery of materials and mobility within the area. This can also impact the durability of the FMRs.
Connectivity Gaps	Relate to the definition of FMRs under AFMA – “These are roads (local roads-provincial, city, municipal and barangay roads; and farm roads) linking the agriculture and fisheries production sites, coastal landing points and post-harvest facilities to the market and arterial roads and highways (As per Section 4, RA No. 8435, AFMA)
Observations during the evaluation period	Declining/Not sustained funding of FMRs under the General Appropriations Act
	Absence of an FMR accessibility index
	The project has been implemented without the concurrence of DA in the detailed engineering design (DED) and program of work (POW)
	Absence of the two (2) project billboards onsite as required by DA-DPWH JMC
	Results of the scoring test was not furnished with RAED
	Maintenance of the road shoulders were not observed (c/o LGU).
	Most of the projects monitored were not completed within the approved contract duration. The request for extension is still pending in the DPWH Regional Office

CHAPTER 3: GAP ANALYSIS

This chapter will present the “gaps” discovered during the M&E activities that were conducted while verifying what has already been implemented vis-a-vis what has been planned. This will serve as a major input in further planning FMR development and management in the country. This will also ensure that all plans, moving forward, are anchored on previous plans, to guarantee continuity and sustainability.

The process of plan review includes → semestral/annual update of the current plan, and, in cases where plans are not met 100%, detailed documentation to support the lag. This unfulfilled part must be addressed as part of “plan adjustment” for the coming years. Also, all FMR related plans must be aligned and should be contributory to existing plans.

3.1 FMR GAPS BASED ON PRODUCTION AREA (NPAAAD) AND NAMRIA’S ROAD INVENTORY

Table 4 shows that NPAAAD’S backlog is 64,155.20 while NAMRIA’S is 78,157.13. These numbers reflect that – NPAAAD’S backlog is computed based on mathematical derivation considering the total production area and the road influence area, and therefore requires thorough study and modelling.

NAMRIA’S backlog of 78,157.13 is composed of unpaved, bad, and poor condition roads, that may or may not include FMR roads. These roads require detailed inventory, tagging and profiling to differentiate it from the FMR roads, in reporting and database management.

Both numbers cannot be combined easily and will require further study and validation. For the interest of this plan, a thorough investigation and development of an integrated road inventory information system that will include all roads – from national to barangay to FMR is recommended.

3.2 PREVIOUS PLANS VS ACTUAL (EXISTING FMRS VS REQUIREMENT)

The proposed FMR to be constructed is 43,223.17 kilometers, as of October 30, 2022. These include barangay, municipal/city, and provincial roads, and new road openings. These projects were proposed and identified both by the LGUs and the DA- Regional Field Offices using the <http://geoagri.da.gov.ph> system.

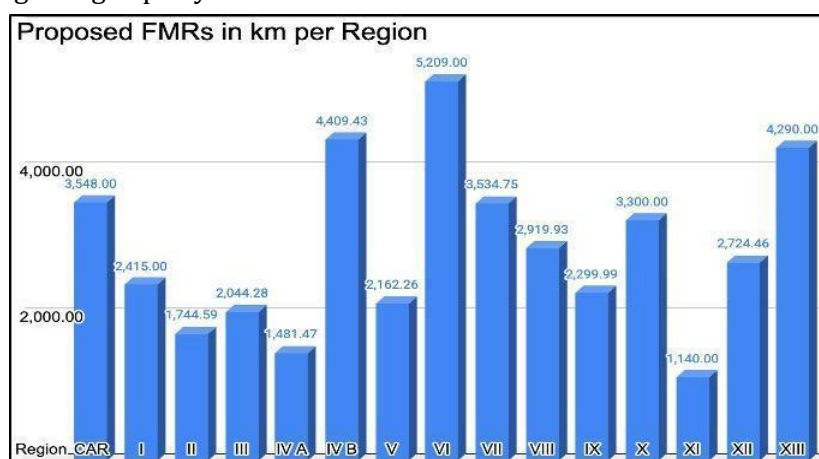


Figure 7: Distribution of the total proposed FMRS per region, in km

As of October 31, 2022, Region VI has the greatest number of proposals with 5,209 km, followed by Region IVB with 4409.43 km and CARAGA with 4,290 km. Real-time data is available anytime, however, while the system accepts proposals direct from the proponents, it still requires field validation from DA's regional staff of RAED.

Proponents that have been chosen after field validation also need to submit all required documentary requirements, which at this time is still being done manually. The ABEMIS-GeoAgri InfoSys is the first step in the digital transformation of the FMR projects of DA.

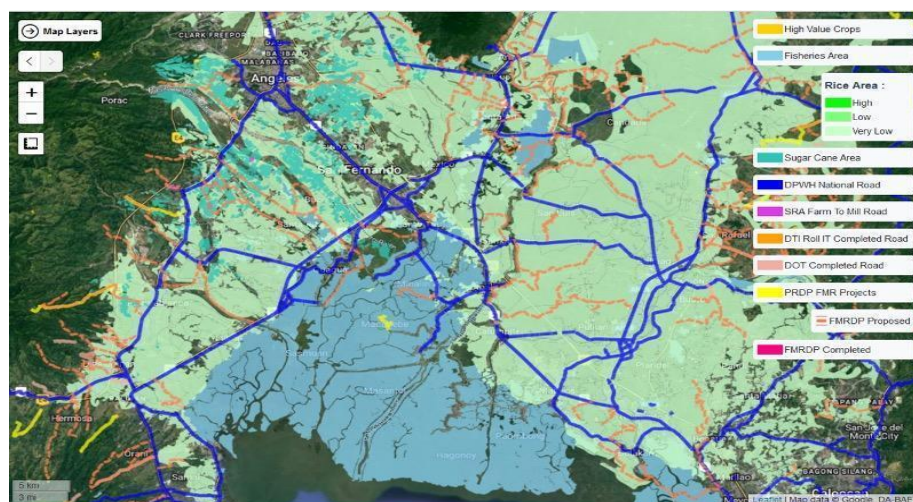


Figure 8: Sample Map Generated by ABEMIS-GeoAgri InfoSys

The map presented above shows the various FMR projects that have been included in the system.

3.3 BUDGET PERFORMANCE

The table below shows the budget requirements vis-à-vis funding released to DA for the implementation of FMRs.

Table 5: Comparison between funded and unfunded FMR proposals from 2016 to 2022

	2016	2017	2018	2019	2020	2021	Total
Proposal	10.01	18.17	46.78	22.45	68.03	74.96	240.4
Funded	7.38	5.92	9.95	10.8	4.79	16.72	55.56
Unfunded	2.63	12.25	36.83	11.65	63.24	58.24	184.84

Below is the graphical representation of the table above. The yellow line is the gap between the proposed budget and the funded or released budget for FMR development. This graph shows that:

FMR Budget Proposal, Funded & Unfunded

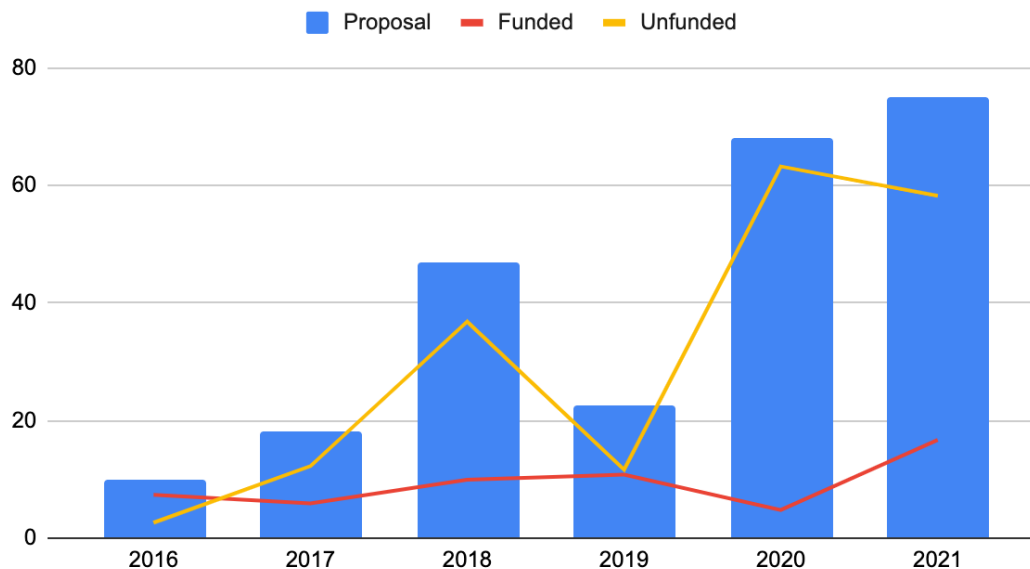


Figure 9: Funded vs Unfunded FMR Budget Proposal

- There's a huge gap of unfunded proposals in 2018, 2020, and 2021
- Year 2016 has the highest percentage of funded proposals at 74%, followed by 2019 corresponding to 48%. Moving forward, the budget allotted did not even meet half of what was proposed
- Year 2020 has the least fund with only 7%. It can probably be attributed to the realignment of national funds to COVID-19 expenses, absence of a concrete FMR development plan, and inefficient spending of implementing agencies.
- There's a dramatic increase in 2018 that could have triggered the decrease in 2019. Note that funding is almost consistent and in upward scale except for 2020
- Php185B (77%) is needed to implement the entire FMRDP proposal
- Cumulative data show that only 23% of the proposed budget is funded, and therefore physical data is expected to reflect this figure.

The DBM emphasize that the annual Budget Priorities Framework (BPF) of the government approved by the Development Budget Coordination Committee (DBCC), and issued by the Department of Budget and Management (DBM), provides that to properly allocate the limited fiscal space, evaluation of agency-submitted proposals should consider the available fiscal space set by the DBCC, the agency's absorptive capacity, implementation readiness, among others. In the case of FMR projects, even if the budget is lodged to various agencies, implementation or actual construction all goes to DPWH, which is being publicly procured anyway. The following implementation strategies are recommended:

- DPWH to only administer big ticket items while projects with 1 km and below can be undertaken by FMR implementing agencies where the budget is lodged.
- DPWH to issue a standard TOR for FMR projects
- DPWH to send technical assistance during procurement

3.4 SWOT ANALYSIS & STRATEGIES

The SWOT analysis was conducted in consultation with DA's FMR implementing agencies. Two (2) of the most relevant issues per category were taken from the SWOT Matrix defined in the FMRDP Strategic Plan 2022-2031.

Table 6: SWOT Analysis and Strategies

		External	
		Opportunities	Threats
		<p>Focused priority to the agriculture sector by the new national leader</p> <p>Accessibility of market connectivity will increase economic activity in the area</p>	<p>Mandanas Ruling poses the risk of neglecting FMR projects because of differing LGU priorities</p> <p>Climate change and natural disasters threaten the structural integrity of FMRs</p>
Internal	Strengths <p>Increasing annual funding for FMR construction (Road Infrastructure Program and Official Development Assistance)</p> <p>Availability of strategic planning tools and policy documents to harmonize FMRDP programming, monitoring and interfacing to the national agenda</p>	<p>Capitalize on the leadership and lobby for the implementation of this plan – integrated PMO, integrated systems and secured funding to achieve 100% implementation by 2028</p>	<p>Lobby for the implementation of the revised/new road development guidelines, the proposed policies, structural changes, projects and activities.</p>
	Weaknesses <p>Weak governance and limited maintenance implementation capacity after turned over to the LGUs</p> <p>Weak monitoring and silo implementation of other FMR-funded agencies</p>	<p>Lobby for the adoption of the policy strengthening the FMR PMO</p>	<p>Educate the LGUs on the value of proper implementation of FMR projects</p>

The Strategies derived from the SWOT analysis in the FMR Strategic Plan are:

- Capitalize on the current leadership's priority and lobby for the implementation of this plan – a strengthened PMO, establishment of integrated systems, and ensure funding to achieve 100% implementation by 2028
- Lobby for the implementation of the revised/new road development guidelines, the proposed policies, structural changes, projects, and activities.
- Lobby for the adoption of the policy strengthening BAFE as FMR PMO
- Educate LGUs on the value of proper implementation of FMR projects

CHAPTER 4: THE PLAN MOVING FORWARD

This chapter will lay the foundation of the implementation of the FMR Project. It will anchor all proposed initiatives of the national government to the current BAFE Vision & Mission to address the defined issues and concerns under the Gap Analysis section, and the current problem of underdevelopment of FMRs compared to other road projects of the government.

4.1 MISSION & VISSION

Mission: Sustain the Philippine Agri-Fisheries and Food System transformation through the revitalize Farm-to-Market Road Development Program. The Philippine agriculture and fisheries sector needs an efficient logistics system to deliver the – right products of the right quality to the right place at the right time for the right cost. With its current efforts as the primary government agency to foster agri-fisheries development, DA has been promoting the construction, repair, and rehabilitation of various agri-fisheries infrastructure support such as the FMRs to provide a reliable road network that will minimize food waste and spoilage brought by long hours of transport and poor road conditions.

Vision: “Matibay at Sapat na Daan, Ang Asenso at Kasaganaan sa kabukiran”, an Adequate and Strengthened Farm-to-Market Road Development Program for a sustainable, modernized & transformed Philippine Food System. A Smart FMR will make the mission achievable, will modernize and will open possibilities to farmers and fisherfolk through new technologies via the internet, which has already become the norm and is expected to continue in the coming years. At the minimum, it will open market opportunities in the local and national levels, thus enforcing competitiveness and collaboration that will ensure export viable products.

4.2 GOALS & OBJECTIVES

The intent of this plan is to present the current situation related to FMRs, to analyze the gap between previously developed plans vis-a-vis what has been implemented and to draft a SMARTER⁹ plan following the “digital transformation” directives of the President. It also aims to address the mission and vision of the agency.

Therefore, the FMR PMO’s Goal is to build Smart FMRs that will connect all production areas with post-harvest facilities and with the market. Following these objectives, this can also serve as the roadmap of FMR development and management:

⁹ specific, measurable, achievable, relevant, timely, evaluated and revised

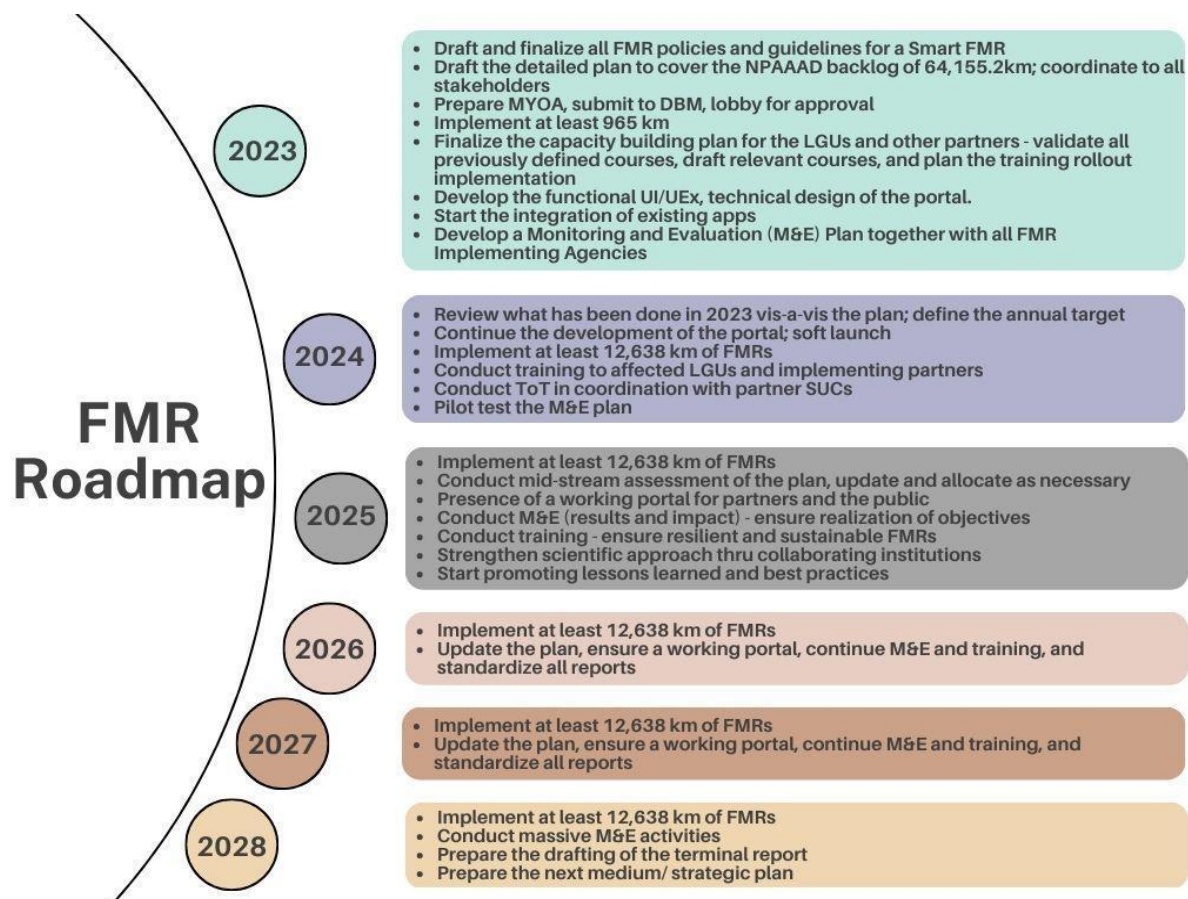


Figure 10: FMR Roadmap

Note that “tasks” are front-loaded on the first year of implementation, specifically a reliable, feasible and ICT-enabled data collection mechanism embedded on the planning and M&E documents in cooperation with the proponents and beneficiaries for easy documentation. It will ensure that all possible issues and concerns are addressed properly and timely.

The following results-based targets are also expected if the above roadmap is implemented:

- At the minimum, farmers’ and fisherfolk income will increase by 10%. Although there are several factors that affect the increase of the income of farmers and fisherfolk, adequate and sustained FMRs are envisioned to contribute in expanding access and in connecting farm areas to a larger scope of opportunities. This target will be measured by the Philippine Statistics Authority (PSA) for 2023 and 2028.
- 30% reduction in hauling cost and 3% reduction in transport losses
- 20% reduction in travel time.

At present, there are no baseline data to support these targets, thus the need to strengthen data collection in aid of planning. Part of the “strengthening the process” is the development of a reliable data collection mechanism. Data should be collected to estimate the baseline value before an FMR is constructed and after it is completed. Moreover, a mid-term review will be conducted to determine the effectivity of the plan.

4.3 STRATEGIC FRAMEWORK

By the end of 2028, more farmers and fisherfolk will be closer to achieving the “Sectoral Goal in PDP Chapter 5” The administration will build efficient road networks by improving and interconnecting linkages between agricultural and fisheries key production areas and markets in the Philippines.

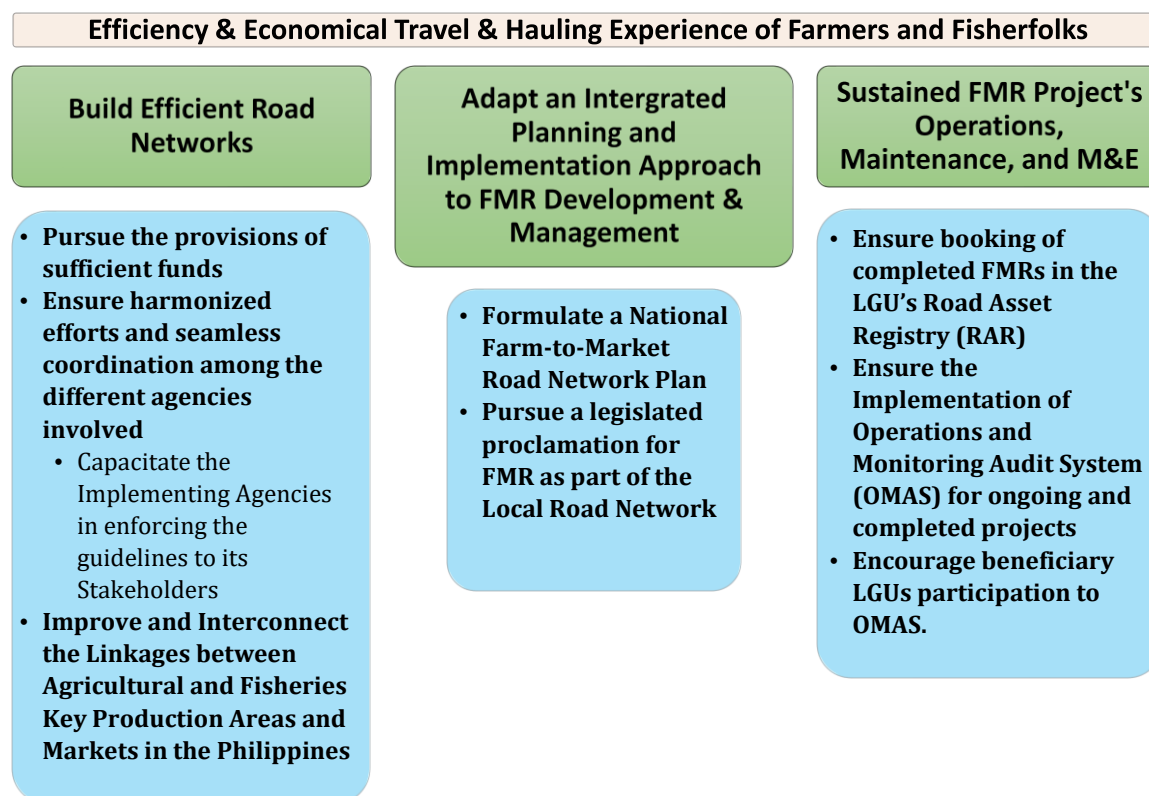


Figure 11: Objectives Tree

To build efficient road networks, it is necessary to harmonize efforts and coordination among the different agencies involved in improving and interconnecting the linkages between agricultural and fisheries key production areas and markets in the Philippines.

The objectives to achieve the target of an efficient and economical travel and hauling experience for farmers and fisherfolk fall under three major pillars: (1) build efficient road networks; (2) adopt integrated planning and implementation, and (3) Sustain farm-to-market road project operations, monitoring, and maintenance. There are also cross-cutting strategies to support other interventions.

4.3.1 Integrated Planning and Implementation

A whole-of-government approach where systems and processes of NGAs work together needs to be implemented. This will include converging government databases to ensure a unified information system on the mapping and inventory of road networks, market facilities, agricultural and fisheries key production areas, and other related interventions. The convergence will also facilitate the exchange, collaboration, and sharing of data.

Moreover, it will also strengthen collaboration between NGAs and the Local Government Units (LGUs), as LGUs play a significant role in the implementation of the program.

The formulation of National Network of FMRs Masterplan where administrative and field data of various government agencies, such as DA, DPWH, DILG, DTI, DOT and DAR, will be harmonized and established for evidence-based policymaking, planning, and prioritization of interventions.

Citizens transacting with the government will also find it easier to locate and access government projects and services.

This mechanism will help strengthen the coordination and collaboration among NGAs to avoid duplication of initiatives and to rationalize efforts, improve decision-making, and maximize complementation of resources.

Digitally transforming FMRs can be built with conduits, as shown below, to facilitate the installation of fiber internet that will give birth to smart agriculture in the area.

The cost of the internet in the Philippines is one of the highest, yet slowest, because of the cost of civil works for its installation.

¹⁰The conduits built in the road will enable micro to small telecommunications companies to participate in the internet and data exchange business. This can be a source of financial sustainability to maintain operational efficiency and functionality of the FMRs as LGUs can rent out each hole of the conduit to potential investors. The LGU can also serve as the internet provider if they have the technical capability, or in partnership with technical agencies, universities or technopreneurs.

FMRs are proposed to be resilient, sustainable, and innovative. Embedding additional conduits will not add much to the cost and its usefulness and practicality will bring down the cost of internet in the area and will even bring business for micro-telcos. With the exponential power and opportunities brought about by the internet, Smart Agriculture can happen if we build FMRs smart and strategic.

4.3.2 SUSTAINED FMR PROJECT OPERATIONS, MONITORING, AND MAINTENANCE

Road maintenance is required as a periodic activity because these are exposed to vehicular traffic, wear and tear and other environmental hazards. The purpose of maintenance is to keep the road in good shape and to effectively slow down deterioration, thereby preserving asset value and deferring the need for costly rehabilitation. Good roads reduce vehicle operating costs, enhance vehicle fuel efficiency, reduce transportation prices, and boost road use, resulting in more efficient movement of people and goods.

Road maintenance as classified in the FMRDP Strategic Plan 2022-2031 has four (4) types: routine, periodic, emergency, and preventive.

- Routine road maintenance is carried out two to three times a year to ensure that the road stays in good condition, and that small problems are dealt with before they become larger problems.
- Periodic maintenance is carried out every few years (four or five) and involves more work and higher costs that include major repairs or improvement of longer stretches of bad roads.

¹⁰ <https://www.quora.com/What-type-of-conduit-do-I-need-in-under-ground-use>

- Emergency maintenance is carried out to repair road surfaces that are affected by natural disasters, such heavy rains, floods, and rock and landslides.
- Preventive maintenance ensures the constant evaluation and monitoring of road conditions for possible defects, and remedy these before the impact of possible natural disasters.

Recipient LGUs will have to commit to shoulder the operations and maintenance cost of FMR after project completion and turnover of management and ownership through a Memorandum of Agreement following the DA AO No. 16, Series of 2020. This is supported by Section 17 of the Local Government Code of 1991.

On the other hand, considering the limitations of LGU resources, the FMRDP Strategic Plan 2022-2031 recommends the following strategies to implement operations and maintenance despite the limitations:

- Identify and secure the sources of funding, such as DOLE-TUPAD for road maintenance projects;
- Undertake preparatory activities to ensure the availability of local resources for the project, i.e. local labor, materials, basic tools, and administrative support from the municipality and the barangay;
- Assist LGUs, in cooperation with DICT and/or DOST, in profiting from the embedded conduits of FMRs by encouraging to work with Telcos or technopreneurs in renting out conduit space for possible cable or fiber optic deployment for internet coverage of the areas. This alone will financially sustain an FMR;
- Identify and organize workers from the community for road maintenance work;
- Implement capacity-building activities for involved participants: municipal engineering officers/staff, barangay administrators and staff, and workers; and
- LGUs shall book the completed FMR in their respective Road Asset Registry for proper recognition and justification for maintenance budget when needed.

4.4 FMR RELATED POLICIES

Philippine National Standard (PNS) issuance on Agricultural Infrastructures – Farm-to-Market Roads – Concrete Roads of 2019.¹¹ “This standard specifies the minimum requirements for the design, construction, and operation and maintenance of one-lane and two-lane concrete Farm-to-Market Roads for the purpose of, but not limited to, the preparation of a program of works, detailed engineering design, procurement, monitoring, inspection, and evaluation. It covers the construction of new roads and upgrading of existing roads with Average Daily Traffic (ADT) equal or less than 400.”

DPWH Department Order (DO) No. 112 provides the revised design standards for tourism and farm-to-market roads. Issued in 2019, this was amended with **DPWH DO No. 15, S. 2020**.

¹¹ PNS/BAFS PABES 289:2019

4.5 PROPOSED PROGRAMS & PROJECTS

For the next five years, the plan is to propose the following projects to efficiently and effectively manage the construction, operations, and maintenance of 64,155.20 km of new FMRs, and to ensure sustainability and road worthiness of existing 67,255.46 km FMRs, co-developed/constructed by partner agencies.

4.5.1 DIGITAL TRANSFORMATION

Enhance the ABEMIS to serve as an integrated portal that will be shared to all FMR implementing agencies, its beneficiaries, and the public. Existing modules and/or microservices of the current ABEMIS and GeoAgri will form part of the portal. Other microservices that will be developed will include the following:

- submission of documents (phase 1) to later include all microservices/modules into the portal;
- monitoring tool connected to the sensors, and a facility to accept inputs from human;
- middleware that will collect all data from other databases and processed accordingly;
- a user-defined homepage and list of reports; others as may be defined during the user requirements workshops.

The enhanced ABEMIS should be properly architected cloud-based with several layers of security and upgraded compute¹² and storage for faster access even for those with low bandwidth users. The system should also be prepared to serve both online and offline users, or consider integrating the use of satellite technologies in the design.

This integrated portal will be built following the SOA-Microservices approach with built-in Artificial Intelligence and Data Analytics, etc. This portal will also accommodate everyone although access is defined by “user level” administration.

The enhanced ABEMIS should capture all processes, forms and data, and reports needed. It will be rebuilt to ensure that all employees and partners working on FMR related projects will only need it to function in their offices or roles in the project. This system should be powerful enough to enable a “work anywhere” setup for BAFE personnel.

The most practical implementation strategies include – evaluate mature and reliable open source systems used by counterpart agencies in agricultural countries; check for an off-the-shelf solution following the required architecture and technology; and should only require minimal customization. Last option is to outsource development and hire or train personnel who will maintain the system and the databases. The DA-BAFE MIS office should hire a business analyst who can communicate between the users and the technical personnel.

Another Digital Transformation type of project that is directly related to FMR development is the insertion of conduits in all road projects. As discussed above, this will save time and cost of civil works related to deploying fiber internet and even electric cables. This can label DA’s FMR to “Smart FMRs” and will contribute to the achievement of “smart agriculture.”

Lastly, the Philippine Space Agency will be tapped for its satellite imagery in the nationwide monitoring of physical state of FMRs that is good, poor or bad condition.

¹² server speed

4.5.2 STRENGTHENING THE PROCESS (STP)

This is a strategic project that aims to integrate all existing processes of partner agencies and, together, review the prioritization criteria as well as the entire process of FMR development – from identification to maintenance. This exercise will form part of the microservices/modules of the enhanced ABEMIS.

The STP Project will also identify personnel tasked to handle RACI at all levels of the process and capacitate them to ensure an efficient and effective performance of duties. While it is too personnel- and process-based, it also aims to standardize both the prioritization criteria and the processes and procedures needed to efficiently implement a nationwide FMR Program participated and collaborated by several agencies.

This project aims to ensure a clear set of policies and processes to abide by and enough skilled personnel who will guide the beneficiaries. Moreover, analytics generated from ABEMIS and GeoAgri should serve as reference in the STP.

4.5.3 TECHNICAL & SCIENCE-BASED APPROACH TO RURAL ROAD DEVELOPMENT

Urban and Regional Planning are both science and art, something that rural areas can still apply. A scientific way of building roads ensures that everyone maximizes its usage.

The Philippine Space Agency has the MULA¹³ satellite that is capable of land use and land cover change mapping, crop monitoring, and forestry management. Aside from this, Google Maps, NAMRIA, and DENR prepared maps, QGIS free maps, and even vendor prepared maps.

There are enough resources that can be tapped, and existing land-use planning principles that can be adopted, the most common of which is the grid design.

This Project aims to integrate a technical and science-based approach to rural road development, starting with the technical design through the use of existing technologies, comparing it with the GeoAgri proposals that are collected from LGUs. Infrastructure projects are capital intensive, longer to implement, and almost impossible to correct. We can't just transfer a road once it's built.

FMRs should connect production areas to the market and/or processing plants. Considering the Philippines archipelagic landscape, interconnectivity between island to island shall be considered in the plan. Furthermore, the "Tulay ng Pangulo Program" under DAR can be integrated and developed the "Drone Transport System".

This can be used as a guide in mapping, other than adopting 100% the suggestions from the people to avoid self-serving tendencies. The FMR PMO should adopt a minimum road length to minimize taking more lands from farmers who are affected by road projects.

Once the prioritization criteria are agreed by all participating agencies tasked to implement an FMR project, there must be a measurable and smart technology, and/or tool, that will validate and scientifically document the adherence to the criteria of the proposed road. This must be verifiable and free from human interventions.

Once the STP Project has achieved its desired output, output data should be fed to the ABEMIS portal, which is the FMR masterplan, to ensure that implementation is fully guided and accepted by stakeholders.

¹³ Multispectral Unit for Land Assessment Satellite

4.5.4 LGU-FMR CAPACITY BUILDING

The Mandanas-Garcia ruling, which is adding more budget to LGUs (in effect transferring some of the national government's responsibilities), can be viewed as disadvantageous for lower class municipalities due to the absence of skilled personnel. To ensure that beneficiary LGUs are adept in FMR project management and in the preparation and updating of the Local FMR Network Plan, BAFE is proposing that the LGU-FMR Capacity Building Project enables Engineers to manage the entire process of FMR development – from identification using science-based tools and the proponent's proposal to pre- and post-construction up to the monitoring and evaluation of the project's impact.

Initially, the list of courses pre-identified by BAFE will be presented to LGU beneficiaries with the approved policies and guidelines. The idea is to partner with the beneficiaries and to empower them to assess their own proposal vis-a-vis the guidelines and the output of the FMR masterplan. The presence of a technology-based tool will facilitate and enable a simultaneous approach to FMR development.

4.6 PROPOSED BUDGET

Based on the gap analysis results, there are still 64,155.20 kilometers of roads that need concreting.¹⁴ To complete the 64,155 kilometers of FMRs requires Php 962,328,000,000.

Therefore, this plan proposes to urban LGUs and the DPWH to help allocate the required budget by implementing an “adopt an FMR” program and propose a Public Private Partnership (PPP) scheme especially for FMRs that will produce export requirements. It also urges LGUs to prioritize road infrastructures that have bigger potential of establishing allied industries.

In terms of construction, priorities will be allocated to proposed FMRs that will directly connect to existing national and municipal roads and market or processing centers. It will then be followed by proposed roads that will connect to feeder roads. This approach will allow the FMRDP PMO to re-evaluate all proposals and ensure adherence to the plan.

Table 7: Proposed FMR in Length and Budget Requirements

Funding Year	Proposed length in km (National FMRNP 2023-2028)	Budget Requirements
GAA 2023	965	14,476,750,000
GAA 2024	12,638	189,570,250,000
GAA 2025	12,638	189,570,250,000
GAA 2026	12,638	189,570,250,000
GAA 2027	12,638	189,570,250,000
GAA 2028	12,638	189,570,250,000
TOTAL	64,155	962,328,000,000

¹⁴ Network of Protected Area for Agricultural and Agro-industrial Development (NPAAAD)

The aforementioned table shows the detailed budget requirements for the installation of Smart FMRs. This table does not include the cost of social preparation, conduct of feasibility studies, training, development of the portal, and conduct of Monitoring and Evaluations. The proposed budget requirements are computed at Php15M per kilometer.

It is proposed that FMR base cost for budgeting be Php 15M++/km following the table below:

Table 8: Detailed Cost of an FMR

Description	Quantity	Unit	Unit Cost (Php)	Amount (Php)
Typical Farm-to-Market Road	1,000.00	l.m.	9,486.00	9,486,000.00
Traffic Management	20.00	C.D.	613.49	12,269.73
Excavation	4,400.00	cu.m.	220.84	971,713.60
Embankment	3,200.00	cu.m.	578.81	1,852,189.87
Reinforced Concrete Pipe Culvert	40.00	l.m.	6,108.93	244,357.25
Reinforced Concrete Lined Canal	120.00	l.m.	3,691.79	443,014.48
Rubble Masonry – Parapet	22.94	cu.m.	6,276.15	143,982.30
Stone Masonry – Slope Protection	375.00	cu.m.	4,804.01	1,801,505.50
Side Ditch	100.00	l.m.	270.70	27,069.73
Conduits	1,000	m	929.5	929,500.00
TOTAL				15,911,602.46

This computation will include basic FMR cost as well as the cost of drainage, structural integrity, and climate proofing of the proposed FMRs. The estimated one million pesos additional cost is a good investment and will provide better connectivity and street design that LGUs can capitalize. This can also be made as a counterpart fund or can be used in a PPP. While the plan is capital intensive, it aims to minimize the cost of operations and maintenance that are passed-on to LGUs. Details of the line-items presented above can be found on the Annex 5.5 of this document.

CHAPTER 5: ANALYSIS AND RECOMMENDATIONS

FMR development and management have been set aside since 2018 in favor of the development of tourism roads. The public, however, continues to demand for sustainable, cheap, but high-quality agricultural produce.

To ensure the concreting of the remaining 64,155.20 kilometers of FMRs, the FMR PMO makes the following recommendations.

5.1 POLICY RECOMMENDATIONS

The following are the proposed legislative/policy agenda and how they will support the program:

- Farm-to-Market Road Development and Acceleration Bill
- Executive Order in the Unified Implementation of FMR to harmonize the implementation, structure and staffing pattern, funding and institutional complementation of FMR in the Philippines
- Mid-Term review and assessment of the plan to redirect, update and allocate as necessary
- Development of ABEMIS as an integrated portal for all NGAs that also implement FMR and other related infrastructures. It shall provide summaries of all FMR related projects from identification to evaluation of its results and impacts on its intended primary beneficiaries. This entails the development of the following:
 - approved processes and data to be collected;
 - systems architecture that will adopt the latest ICT technology, such as a SOA Microservices approach, adoption of a middleware where data exchange will happen in case all participating agencies chose to maintain their current system, and an artificial intelligence approach;
 - data governance structure and the reports it will generate.
- Formulation and Adoption of the National FMR Accessibility Index to establish common index for FMR
- As an interim, strengthen BAFE's FMRDP PMO by integrating all FMR related budgets, draft an unanimously agreed criteria between and among implementing agencies – DA, DTI, and DOT – and define the responsibilities of each and every participating office/project/personnel.
- The cost of road implementation or improvement should be considered in relation to the projected benefits and should be consistent with the market. Roads in areas with projected sustained growth should be prioritized.
- Consider that some LGUs may not have the financial capacity to provide the required 10% LGU counterpart for the FMR project, especially the fourth up to the sixth income classes, which are mostly agricultural communities
- Enhance science-based and 21st century opportunities related to FMR in support of the Smart Agriculture and Digitalization program
- Promote a more creative way of raising funds or achieving a 100% concreted FMR, such as but not limited to:
 - “adopt an FMR” program in highly urbanized cities

- reallocate DPWH's O&M budget to FMR development instead of repairing roads. This can be delegated to the LGUs in favor of the Mandanas-Garcia ruling
- adopt a PPP approach for high-yielding and production exporting areas
- allocate majority of the FMR national budget to 4th-6th class municipalities
- DPWH together with DBM through its Procurement Service to extend technical assistance in bidding an FMR construction project. Note that DPWH's role in FMR Development is through the conduct of public bidding that can be shared and implemented by implementing agencies. This way, DPWH's technical assistance will be focused on their core competency, which is advising on the structural and civil engineering strength of the FMRs.

5.2 STRUCTURAL/GOVERNANCE RECOMMENDATIONS

The below functional structure is based on the FMR process (FMR development) that includes stakeholders management to handle project turnover and acceptance and the conduct of regular results and impact evaluation to ensure that LGUs are managing their FMRs; and the usual functions of an organization, such as admin & finance and information & technology management.

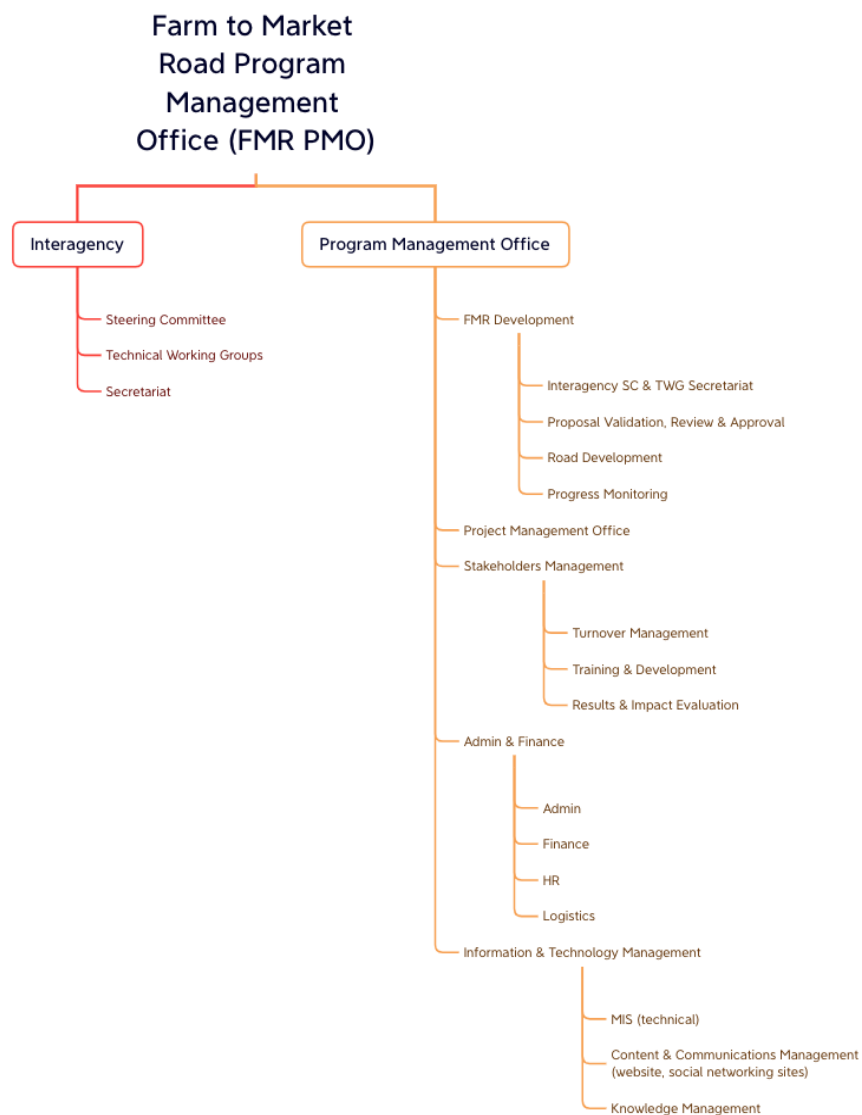


Figure 13: Proposed Functional & Organizational Structure

Pursuant to Section 24 of RA No. 10601 and the JAO No. 1, s. of 2023 (Annex 5.10), BAFE shall be strengthened as the Program Management Office of the National Farm-to-Market Road Network Plan 2023-2028. It shall be equipped with agricultural and biosystems engineers, civil engineers, data scientists, project management specialists, trainers, ICT technical staff, online writers and editors, and other personnel necessary to run an efficient and effective office. Upon review and approval of the DA management, the revised functional structure will then be submitted to DBM for the creation of plantilla positions and regular funding. The interagency SC and TWG will follow the responsibilities as defined in the JAO for FMR.

5.3 PROGRAMMATIC RECOMMENDATIONS

Policies and structural changes take time, so in the meantime the following programs, projects, and activities are proposed to address current issues and concerns and to deliver the goal of this plan. Most of the listed recommendations are reiterations from the National FMRDP.

- Review and if necessary, revise DA AO No. 16, Series of 2020 to include the proposed social evaluation criteria in choosing an FMR site.
- Develop a manual that will guide stakeholders in complying with DA AO No. 16, Series of 2020 (Annex 5.9). The manual shall include detailed processes and the forms to be prepared and submitted. Forms shall contain choices to be selected, fields for required information, and whenever applicable, guide questions to ensure that all required information are provided by the stakeholders.
- Enhance ABEMIS and GeoAgri systems to support the entire FMRDP process from identification to impact monitoring. Make the systems accessible to the public to allow individuals to submit their observations and other information related to FMR projects.
- Develop, operate, and maintain the LGU's Road Asset Registry (RAR) that concerns FMRs; integrate to ABEMIS for full-process visibility.
- Enhance the science-based approach by conducting R&D activities and adopting applicable technologies such as but not limited to "Drone Transport System", to enable seamless interconnectivity of FMRs to support SMART agriculture and the digital transformation policy of the government.

ANNEXES

5.4 ROAD DEFINITION AS ADOPTED FROM DPWH

Table 9: Road Definition as adopted from DPWH

Condition Rating	Maintenance Condition	Indicative Riding Condition	Treatment Measures
Good	Maintainable Condition	Normal speed at 70-80 kilometer per hour (Kph)	Little or no maintenance required but routine maintenance
Fair		Normal speed at 50-60 kph	Some partial or full depth repairs (periodic maintenance)
Poor	Not in Maintainable Condition	Normal speed at 30-40 kph	Extensive full depth repairs and some replacement of pavement (rehabilitation)
Bad		Normal speed at 20-30 kph	Full rehabilitation or replacement of pavement (reconstruction and or improvement)

5.5 FMR PROJECT COSTS PER REGION

Table 10: FMR Project Costs per Region

ITEM NO.	REGION	TOTAL ESTIMATED COST OF TYPICAL FMR (PHP)	TOTAL UNIT COST OF OTHER LINE ITEMS PER REGION (PHP)							
			TRAFFIC MANAGEM ENT (PHP/C.D.)	EXCAVATION (PHP/cu.m.)	EMBANKM ENT (PHP/cu.m.)	REINFORCED CONCRETE PIPE CULVERT (PHP/l.m.)	REINFORCED CONCRETE LINED CANAL (PHP/l.m.)	RUBBLE MASONRY PARAPET (PHP/cu.m.)	STONE MASONRY SLOPE PROTECTION(PHP/cu.m.)	SIDE DITCH (PHP/l.m.)
1	Cordillera Administrative Region	8,620,000.00	608.77	218.17	477.56	5,460.34	3,521.48	5,814.12	4,280.19	255.69
2	Region I (Ilocos Region)	8,380,000.00	607.50	218.24	352.26	5,073.93	3,527.52	5,395.84	4,466.94	241.60
3	Region II (Cagayan Valley)	9,820,000.00	621.00	218.54	352.74	5,224.91	3,726.22	5,240.77	4,376.70	267.55
4	Region III (Central Luzon)	9,330,000.00	642.16	219.01	567.10	5,596.41	3,728.14	5,398.00	4,422.66	250.69
5	Region IV-A (CALABARZON)	8,820,000.00	633.57	218.82	298.76	6,706.33	3,635.03	5,282.85	4,218.65	236.94
6	Region IV-B (MIMAROPA)	9,170,000.00	599.39	218.06	762.71	6,163.90	3,515.42	6,117.31	4,858.86	282.36
7	Region V (Bicol Region)	11,750,000.00	594.22	240.87	572.79	7,148.92	3,985.98	7,907.18	6,841.25	313.34
8	Region VI (Western Visayas)	9,250,000.00	615.12	232.60	646.13	6,126.89	3,565.91	6,687.94	5,188.08	276.73
9	Region VII (Central Visayas)	10,310,000.00	614.46	227.78	665.97	6,553.58	4,087.71	10,980.40	5,354.95	321.65

ITEM NO.	REGION	TOTAL ESTIMATED COST OF TYPICAL FMR (PHP)	TOTAL UNIT COST OF OTHER LINE ITEMS PER REGION (PHP)							
			TRAFFIC MANAGEMENT (PHP/C.D.)	EXCAVATION (PHP/cu.m.)	EMBANKMENT (PHP/cu.m.)	REINFORCED CONCRETE PIPE CULVERT (PHP/L.m.)	REINFORCED CONCRETE LINED CANAL (PHP/L.m.)	RUBBLE MASONRY PARAPET (PHP/cu.m.)	STONE MASONRY SLOPE PROTECTION (PHP/cu.m.)	SIDE DITCH (PHP/L.m.)
10	Region VIII (Eastern Visayas)	9,550,000.00	600.92	208.89	613.37	7,229.01	3,605.82	5,554.74	4,522.36	253.20
11	Region IX (Zamboanga Peninsula)	9,140,000.00	609.16	218.16	559.78	4,928.66	3,984.31	6,425.82	5,352.31	307.51
12	Region X (Northern Mindanao)	10,280,000.00	618.21	218.48	669.21	6,500.56	3,774.04	5,583.58	4,568.30	268.91
13	Region XI (Davao Region)	9,720,000.00	633.16	218.80	806.76	5,212.08	3,565.81	6,340.20	4,731.09	266.13
14	Region XII (SOCCSKSARGEN)	9,250,000.00	605.87	218.20	676.61	6,571.22	3,551.81	5,009.95	4,045.16	242.84
15	Region XIII (Caraga)	8,900,000.00	598.79	218.04	660.39	7,137.23	3,601.61	6,403.57	4,832.72	275.32
	<i>Average Cost</i>	9,486,000.00	613.49	220.84	578.81	6,108.93	3,691.79	6,276.15	4,804.01	270.70

5.6 REVISED PRIORITIZATION CRITERIA

Table 11: Revised Prioritization Criteria

	Code	Criteria	# of Questions	Questions
I.	RIA	Road influence area	5	1. Existing Agricultural Production Area in hectares 2. Potential Agricultural Production Area in hectares 3. Existing Production area of Livestock/poultry or fisheries 4. Annual Average Production Volume in metric tons (MT) of 5 major agricultural products within the RIA 5. Location of the proposed FMR
II.	NOB	Number of beneficiaries	1	6. Number of Beneficiaries in barangays within the RIA
III.	DNL	Distance to network links	5	7. Distance to agricultural or fisheries production areas 8. Distance to market / trading or coastal landing port 9. Distance to post-harvest processing facilities 10. Distance to agri-tourism areas 11. Proximity or link to an existing or scheduled for construction all-weather road
IV.	PRC	Present road conditions	5	12. Length of the proposed FMR 13. Present Road Condition 14. Development type of the proposed FMR based on present road surface and classification 15. Will it require a bridge? 16. 'road right of way' condition
V.	CCA	Climate change adaptation	3	17. Vulnerability of the proposed FMR to Flooding 18. Vulnerability of the proposed FMR to Siltation/Erosion 19. Vulnerability of the proposed FMR to possible earthquake, volcanic eruption or tsunami
VI.	ADT	Average daily traffic	1	20. Average Daily Traffic of vehicles ¹⁵ passing
TOTAL				

¹⁵ Vehicles include 'agricultural vehicles, machineries or equipment' such as but not limited to a tractor,

5.7 AO NO. 16, SERIES OF 2020 PRIORITIZATION INDICATORS METRICS

Table 12: AO No. 16, Series of 2020 Prioritization Indicators Metrics

Criteria	Indicators	5	4	3	2	1	Weight	Score
RIA	Existing Agricultural Production Area in hectares	201 or more	151-200	101-150	51-100	50 or less		
RIA	Potential Agricultural Production Area in hectares	101 or more	75-100	51-74	26-50	25 or less		
RIA	Existing Production area of Livestock/poultry or fisheries	201 or more	151 to 200	101 to 150	51 to 100	50 or less		
RIA	Annual Average Production Volume in metric tons (MT) of 5 major agricultural products within the RIA	1,201 or more	901 to 1,200	601 to 900	301 to 600	300 or less		
RIA	Location of the proposed FMR	within the declared SAFDZ and/or ancestral land and included in the LRNDP/R DP priority list	within the declared SAFDZ and/or ancestral land and included in the LRNDP/R DP but not in the priority list	adjacent to the declared SAFDZ and/or ancestral land and included in the LRNDP/R DP priority list	leading to the declared SAFDZ and/or ancestral land and included in the LRNDP/R DP but not in the priority list	Within the declared protected area		
DNL	Distance to agricultural or fisheries production areas	0.01 – 0.5km	0.501 – 1 km	1.101 km – 1.5km	1.501 – 2km	More than 2km		
DNL	Distance to market / trading or coastal landing port	1-5km	6-10km	11-15km	16-20km	More than 20km		
DNL	Distance to post-harvest processing facilities	1-5km	6-10km	11-15km	16-20km	More than 20km		
DNL	Distance to agritourism areas	1-5km	6-10km	11-15km	16-20km	More than 20km		
DNL	Proximity or link to an existing or scheduled for construction all-weather road	Perpendicular distance of 1km to an existing concrete road	Perpendicular distance of 1km to a road scheduled for	Perpendicular, intersecting or parallel to a barangay road by	Perpendicular, intersecting or parallel to a barangay road by	Perpendicular, intersecting or parallel to a barangay road by		

			constructi on	more than 1km but less than 3	more than 3km but less than 5	more than 5km		
PRC	Length of the proposed FMR	More than 4km	3.1 – 4	2.1 – 3	1.1 – 2	1km		
PRC	Present Road Condition	Very Bad. Footprint or trail is the only access going in and out of the RIA	Bad. Road is not passable in most days of the year. Very muddy with deep potholes during raining season while dusty during summerti me	Poor. Road is passable in most days of the year. Muddy with potholes during rainy season. Requires regular maintena nce after rainy season	Fairly Good. Road is passable in most days of the year. Requires regular maintena nce and restoratio n after rainy season	Good. Road is unpaved but passable throughout the year		
PRC	Development type of the proposed FMR based on present road surface and classification	Constructi on of a new road, which used to be an earth trail/foot /tire path road	Concretin g of an existing unpaved road, which used to be gravel Callejon road	Concretin g of an existing unpaved road, which used to be asphalt Callejon road	Repair of an existing Concrete with asphalt overlay road	Repair of an existing PCCP road		
PRC	Will it require a bridge?	No	Yes, at least 1km	Yes, 1.1 – 2km	Yes, 2.1 – 3km	Yes, more than 3km		
PRC	'road right of way' condition	no issues, governme nt land	owner is part of the beneficiar y and will sell immediat ely based on prevailing market price as defined by the Assessor's Office	owner is willing to cooperate , subject to negotiatio n	landowne r will not sell to the governme nt	No idea		
NOB	Number of Beneficiaries in barangays within the RIA	2,001 or more	1,501 to 2,000	1,001 to 1,500	1,000 to 500	499 or less		
CCA	Vulnerability of the proposed FMR to Flooding	Not Vulnerabl e	Slightly Vulnerabl e	Vulnerabl e	Moderatel y Vulnerabl e	Very Vulnerable		

CCA	Vulnerability of the proposed FMR to Siltation / Erosion	Not Vulnerable	Slightly Vulnerable	Vulnerable	Moderately Vulnerable	Very Vulnerable		
CCA	Vulnerability of the proposed FMR to possible earthquake, volcanic eruption or tsunami	Not Vulnerable	Slightly Vulnerable	Vulnerable	Moderately Vulnerable	Very Vulnerable		

5.8 LOGICAL FRAMEWORK ANALYSIS

Table 13: Logical Framework Analysis

Narrative Description		Objectively Verifiable Indicators (OVIs)	Means of Verification (MOV)	Assumptions
Goal / Outcome	To Increase farmers and fisherfolk income	Farmer's income increased by 10% as a result of the FMR installation	PSA data Impact Assessment Reports	
Result / Objective	Reduce hauling cost, transport losses and travel time	Hauling cost reduced by 30%, six months after the project completion Transport losses reduced by 3% Travel time reduced by 20% after the project completion	Rapid Appraisal of Emerging Benefits (RAEB)	FMRs will be constructed and completed
Outputs	Farm-to-Market Roads (FMRs) interconnecting / linking the production areas and markets were constructed	___km of FMRs constructed/concreted (km)	Terminal report	The government will allocate sufficient funds to complete the entire target road length The program has sufficient manpower complementation between and among the implementing agencies
Activities / Inputs	Locate and map out agricultural and fisheries key production areas, markets, trading facilities, and road networks.			
	Validate proposed FMR projects, follow up the documentary submissions of beneficiaries	Number and percentage of validated proposals and LGUs submitted the mandatory requirements	Reports	LGUs will prioritize the project and assign competent people to work on the documentation needed
	Construct Farm-to-Market Roads, Strictly monitor the implementation phase	Number and percentage of proposals implemented, include phases of development	Reports	Insurgencies will not hamper the project implementation There will be no political intervention
	Evaluate the impact	Number of studies conducted	Reports	



Republic of the Philippines
Department of Agriculture
OFFICE OF THE SECRETARY
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ADMINISTRATIVE ORDER

No. 16
Series of 2020

**SUBJECT : REVISED GENERAL GUIDELINES ON THE IMPLEMENTATION OF
THE DEPARTMENT OF AGRICULTURE FARM-TO-MARKET ROADS
DEVELOPMENT PROGRAM (DA-FMRDP)**

BACKGROUND:

The Department of Agriculture (DA) is mandated to undertake various agri-fisheries infrastructure projects such as, but not limited to the construction, restoration, and rehabilitation of irrigation systems, post-harvest facilities and farm-to-market roads (FMRs) in order to provide better opportunities to farmers and fisherfolk by increasing farm production at lower cost and thereby increasing their incomes and making food more affordable to the general public.

FMR is a vital intervention that will improve the links between the production areas and markets, and enhance the efficiency of transporting agricultural products. Therefore, well planned and implemented FMR directly supports the realization of the DA Policy Framework for inclusive Agri-industrialization and New Thinking for Agriculture.

LEGAL BASIS:

Section 52 of RA No. 8435 (Agriculture and Fisheries Modernization Act) mandates the Department of Agriculture (DA) to coordinate with the Local Government Units (LGUs) and the resident-farmers and fisher folk to identify priority locations of FMRs taking into account the number of farmers and fisher folk and their families who shall benefit therefrom and the amount, kind and importance of agricultural and fisheries products produced in the area. Likewise, Section 24 of RA No. 10601 (Agricultural and Fisheries Mechanization Law) mandates the Bureau of Agricultural and Fisheries Engineering (BAFE), a new bureau of DA, to coordinate, oversee and monitor the national planning, implementation and regulations of FMRs.

In view of this mandate of DA, the General Appropriations Act (GAA) provides annual appropriations for FMR under the DA budget. The allocated budget will be used for the construction, repair, rehabilitation, and road openings of FMR in designated key production areas which will be directly released to the Department of Public Works and Highways (DPWH), and part of the allocation is for the FMR network planning and monitoring services to be undertaken by DA.

As such, a revised guidelines on the implementation of DA Farm-to-Market Road Development Program is hereby issued with the following provisions:

SECTION I. Scope- This guidelines covers the procedures in the identification, validation, selection and prioritization, design, approval, and coordination arrangements with DPWH on the construction or rehabilitation and monitoring of FMRs to be implemented under Farm-to-Market Road Development Program (FMRDP). It also includes the roles and responsibilities of various operating units of DA.

The FMRDP shall give priority to the concreting of existing unpaved FMRs as well as new road openings that links production areas to markets. Access roads classified as national, provincial, city or municipal roads, or identified as industrial roads or farm-to-mill roads are not eligible for funding under FMRDP.

SECTION 2. Definition of Terms- For the purpose of this Administrative Order, the following terms shall be used:

- a) *Augmentation* refers to the act of the constitutional officers authorized to use savings in their respective appropriations to cover a deficiency in any existing item of appropriation within their respective offices¹;
- b) *Barangay Roads* refers to rural roads located either outside the urban area of city or outside industrial, commercial or residential subdivisions which act as feeder to farm-to-market roads, and which are not otherwise classified as national, provincial, city or municipal roads. Roads located outside the Poblacion area of municipality and urban area of a city to be designated as such by the Barangay Council concerned²;
- c) *City Roads* refer to roads/streets within the urban area of the city to be designated as such by the Sangguniang Panglungsod²;
- d) *FMR Concreting* refers to the process of building of road following engineering plans, designs and specifications and approved existing engineering methodology that involves but not limited to culvert construction, slope protection and Portland Concrete Cement Pavement (PCCP) construction utilizing manpower and equipment resources;
- e) *Farm-to- Market Road* refers to road within the agriculture and fisheries production areas, coastal landing points, post-harvest or processing facilities that links to local roads, national highways and market³;
- f) *FMR Network Plan* refers to a systematic list of proposals detailing the integrated connectivity of FMR that links identified agri-fisheries production areas, processing and other agriculture-related infrastructures, trading posts, local markets and agri-tourism sites with the local core road network and national highways. The FMR Network Plan is supplementary to the Local Roads Network Development Plan (LRNDP) of respective LGUs mapping the development of identified and prioritized road links for rehabilitation, improvement or new construction/opening primarily serving the local agriculture sector into all-weather accessibility;
- g) *Farm-to-Mill Road* refers to roads connecting the sugarcane farms to any sugarcane processing facilities such as sugar mills, ethanol distilleries, biomass powerplants and other production facilities using sugarcane as raw material with specifications that can handle truckloads of sugarcane⁴;
- h) *Local Roads* refers to roads that are either barangay, municipal, city or provincial roads;
- i) *Local Road Network Development Plan (LRNDP)* refers to an integrated 5-year development plan for the sustainable development and maintenance of local road networks. The LRNDP supports efforts of provincial governments to improve local competitiveness through adequate and well-maintained roads infrastructure and better roads connectivity to ease movement of people and goods, and spur local economic development⁵;

- j) *Local Road Network Map* refers to a map for local road networks which is included in the Local Road Network Development Plan (LRNDP) of the Local Government Units (LGUs);
- k) *Modification* refers to any change in the FMR project title such as but not limited to typographical errors and change of location within the congressional district;
- l) *Municipal Roads* refer to roads/streets within the poblacion area of a municipality to be designated as such by the Sangguniang Bayan⁶;
- m) *National roads* refer to roads that are continuous in extent that form part of the main trunk line system; all roads leading to national ports, national seaports, parks or coast-to-coast roads. National arterial roads are classified into three groups from the viewpoint of function, i.e. North-south backbone, East-West Laterals and Other Strategic Roads³;
- n) *Portland Cement Concrete Pavement (PCCP)* refers to type of concrete road which consist of a Portland Concrete Cement slab that is usually supported by a granular or stabilized base, and a subbase. (check DGCS definition by DPWH);
- o) *Provincial Roads* refer to roads connecting one municipality with another; all roads extending from a municipality or from a provincial or national roads to a public wharf or railway station; and any other road to be designated as such by the Sangguniang Panlalawigan³;
- p) *Rehabilitation or Restoration* refer to a grouping of types of work which restore structural capacity and performance, and/or enhance safety. These types of work are applicable to infrastructure in poor or bad condition. In the case of pavement, this shall not extend into the subgrade. In the case of flood control, this includes dredging;
- q) *Right of Way (ROW)* refers to a part of the entirety of a property, site or location, with defined physical boundaries, used or required by a national government projects⁷;
- r) *Road Influence Area (RIA)* refers to the area that an FMR is expected to effectively service to ensure that the value of investments in an FMR will be much more beneficial than costly. RIA captures an indicative area, including both agricultural and built-up areas, that will directly utilize the road with the goal of supporting and augmenting agricultural activities in the area; and
- s) *Strategic Agriculture and Fisheries Development Zones (SAFDZ)* refers to the areas within the Network of Protected Areas for Agricultural and Agro-Industrial Development (NPAAAD) identified for production, agro-processing and marketing activities to help develop and modernize, with the support of government, the agriculture and fisheries sectors in an environmentally and socio-culturally sound manner.⁸

SECTION 3. Coverage- The Guidelines shall cover rural roads infrastructure that act or function as access roads to production areas and are not otherwise classified as national, provincial, city or municipal roads. It includes the construction of new barangay roads/road openings and upgrading/improvement of existing FMRs, and other farm access roads. However, it shall give priority to the concreting of existing unpaved FMRs that links production areas to markets.

Depending on the location, the construction of FMR shall be:

Road Lane	ADT	Minimum pavement width (m)	Minimum road shoulder width (m)
One lane	Less than 50	2.5	0.75
Two Lane	50 to 200	5	1.5
Two Lane	200 and above	6.1	1.5

One-lane roadway:

- a) There shall be provisions of turnout in strategic locations for maneuver of two vehicles traveling in opposite directions and in critical sections especially on steep grades along mountainous areas. Turnout shall be about 1 m wide and 60 m long. The minimum distance of consecutive turnouts shall be 1000m.⁹
- b) The road shall be constructed either left or right from the center of the existing ROW in order to accommodate expansion in the future¹⁰.
- c) The design of the roadside ditch within the ROW should be earth ditch, since it will be damaged during expansion. However, steep slope ditch should be constructed of other materials to prevent erosion.¹¹

The appropriate road lane shall be determined during the validation process

SECTION 4. Identification and Social Preparations-All FMR requests either for concreting, road openings, rehabilitation and improvement emanating from local government units (LGUs), agricultural and fisheries councils (AFCs), farmers and fisherfolk associations or other proponents shall be submitted or forwarded to the concerned DA Regional Field Office through the Regional Agricultural Engineering Division (RAED). Prior to the validation of FMR proposals, the RAED shall ensure that the following supporting documents are submitted or complied by the proponent/s:

- a) Letter of intent or resolution stating the need for connecting the production area to the market through the construction of FMR and endorsed by the LGUs;
- b) Local Road Network Map showing the accessibility and connectivity of the proposed road to equal or higher road classification and to market or trading center/agricultural infrastructure facility;
- c) Prioritization profile accomplished by the LGU/proponent (Annex B, downloadable in BAFE Website).
- d) Certification from Municipal/City or Provincial Planning Development Office that the proposed FMR project is included in the Local Development Investment Plan (LDIP) or Local Agriculture and Fisheries Modernization Plan (AFMP) or Provincial Commodity Investment Plan (PCIP).
- e) Endorsement from the Regional Development Council that the project is part of the Regional Development Plan (RDP). The concerned DA RFO shall coordinate, secure and validate this with their respective NEDA Regional Office.

Please see Annex A (RAED Checklist)

The RAED shall be responsible for its encoding to ABEMIS, validation, geo-tagging and initial screening of the proposed FMR projects.

SECTION 5. Validation of Proposed FMR Projects- 1) Following the submission of complete supporting documents by the FMR proponent, the RAED shall conduct validation and ensure that the following criteria are satisfactorily complied:

- a. The FMR serves a road influence area (RIA) that has significant agricultural potential (i.e. FMR as road within the agriculture and fisheries production areas, coastal landing points, post-harvest or processing facilities that links to local roads, national highways and market);
- b. It is part of a connected road network system that provides vital access to and from the existing or potential key production areas and the nearest market centers (e.g., trading post, public market, port or administrative center, postharvest processing facility), or agri-tourism areas;
- c. It is linked to an all-weather road of equal or higher quality;
- d. It must have a minimum length of 1.00 kilometer for both flat and rolling terrain and inclined steep areas (special areas) to enhance impact and for cost efficiency;
- e. The proposed road section shall be one continuous road;
- f. The FMR has a minimum perpendicular distance of one (1) kilometer to another concreted road or road scheduled for construction. Exemption shall apply for those projects that are : 1) located in the area with natural barriers, 2) provide direct access to post harvest facilities, small scale irrigations projects, costal landing points, agri-tourism sites and other agri-infra projects;
- g. It is within the Strategic Agriculture and Fisheries Development Zones (SAFDZ);
- h. It shall benefit the farmers, fisherfolk, and agrarian reform community within the barangay or cluster of barangays;
- i. It has no adverse environmental impact within the RIA; and
- j. The proposed FMR projects should be included in the FMR network plan/ Regional Development Plan (RDP) submitted by the LGU through DA-RFO to avoid duplication or overlapping of projects.

Please see Annex C (RAED Checklist)

- 2) When the FMRs are found feasible after the RAED validation, these shall be included or updated in the Regional DA FMR Registry or Database (ABEMIS) subject to the submission of the original copies of the following documents:
 - a. Certification from the concerned Municipal or City Local Government Unit or the concerned DPWH District Office that the proposed road is : (i) neither part of any higher road classification such as national, provincial, and municipal nor classified as industrial or farm-to-mill roads; and (ii) will not be reclassified/upgraded into national roads for the next ten years;
 - b. Proponent LGU resolution or endorsement of the project stating its willingness to assist in the road right of way acquisition, allocation of budget for the perfection of the conveyance of Title of the road right of way, planning, construction, inspection and monitoring of the project, and its support in the operation and maintenance of the project after the turnover;

- c. Municipal/City LGU resolution to provide a counterpart of not less than ten percent (10%) of the project cost subject to their Internal Revenue Allotment (IRA), either in cash and/or in kind;
- d. Certification from the Local Chief Executive (LCE) of no road right-of-way (RROW) conflict;
- e. A notarized letter from the Project Affected Person (PAPs) such as land/property owner and authorized representative expressing his/her willingness to donate a portion of the private property to be acquired for the RROW, if a private property will be affected by the proposed FMR;
- f. Certification from the LCE and/or Municipal/Provincial Environment and Natural Resources Office (M/PENRO) that the proposed project has no adverse environmental impact within the Road Influence Area (RIA);
- g. Certification from the National Commission on Indigenous Peoples (NCIP) that the project will affect an ancestral domain of Indigenous People or Indigenous Cultural Communities (IP/ICCs) if applicable;
- h. Certification from the Barangay Chairperson expressing commitment and support to ensure safety and protection in the proposed FMR site/s and within the RIA if a disruption of the peace and order situation occurs during the project pre-construction, construction, and monitoring activities; and
- i. Copy of deed of donation and other conveyance instrument of the RROW prior to approval of the project

Please see Annex D (RAED Checklist)

- 3) The RAED shall coordinate and collaborate with the Agricultural and Biosystems Engineering (ABE) Units of the LGUs to assist them in the validation of FMR projects.

SECTION 6. Review and Approval- 1) The list of validated, eligible and with complete documentation requirements of proposed FMR projects shall be prioritized by RAED using Prioritization Indicators (See Annex E).

- 2) The weighted point allocation system shall be used and shall measure the relative importance of each criterion with respect to the project being evaluated. After assessing the proposed FMR, all points shall be summed-up per major category to obtain the total points earned. Further, the ranking of FMR projects as to priority shall consider the following:
 - a. The threshold point or number of the total earned points for each proposal; and
 - b. The amount available for implementation by summing up the estimated total cost of each project, starting from those which get the highest point in each legislative district until the amount available for funding is exhausted in the computation.
- 3) The list of validated and prioritized FMR projects by province, district, municipality or city with its FMR Proposal Evaluation Reports (See Annex C, D and E) prepared and certified by RAED shall be endorsed by the concerned DA Regional Director to the FMRDP-PMO for consolidation. The DA Regional Director shall likewise harmonize the validated and prioritized FMR projects endorsed by the Congressional Representatives and LGUs and submit and recommend for approval to the Secretary through the FMRDP-PMO;

- 4) Eligible and prioritized FMRs projects that were submitted to FMRDP-PMO prior to the Annual Budget Call can be considered for inclusion in the DA budget proposal submission for the year. Otherwise it shall be considered in the next budget proposal cycle;
- 5) The FMRDP-PMO shall endorse through the Undersecretary concerned the list of prioritized FMR projects to the Office of the Secretary for approval.

SECTION 7. Endorsement for Funding- 1) The DA Secretary shall endorse the approved list to the Department of Budget and Management (DBM) for funding under the annual National Expenditure Program (NEP);

- 2) Upon release of the list of FMR projects included in the NEP, the FMRDP-PMO shall provide a copy to the DA-RFOs to ensure that the following information such as: **name, location, and amount of the project** are in order and doesn't have any typographical errors (i.e. a) *Concreting of Sitio A, Brgy. B to Brgy. C FMR, Barangay B*, Municipality/City, Province* b) *Concreting of Brgy. B and Brgy. C FMR, Barangay B and C**, Municipality/City, Province*).

Note: * refers to the *direction* of FMR where it will be constructed.

**refers to 2 sites of different barangays and both will be constructed.

- 3) The RAED shall conduct review of the proposed projects under NEP. If a proposed FMR project is already funded by other government funding agencies, the replacement must come from the list of unfunded prioritized FMR project/s in the same legislative district.
- 4) The DA Regional Director shall submit the updated list of FMR projects to FMRDP-PMO for final review.
- 5) Upon approval of the General Appropriation Act (GAA) for the year, the FMRDP-PMO shall ensure that the list of approved FMR projects are posted on the official website of DA and ABEMIS of the BAFE reflecting the following information:
 - (a) location of FMRs which must lead to local roads, national highways and key production areas;
 - (b) estimated length in kilometers of FMRs to be constructed;
 - (c) costing and project specifications;
 - (d) estimated number of farmer/fisherfolk beneficiaries; and
 - (e) status of implementation of the said projects.

SECTION 8. Coordination with DPWH on the implementation of funded FMR projects-The FMRDP-PMO and BAFE shall undertake close coordination with DPWH Central Office, as well as the DA RFOs through RAEDs with DPWH Regional and District Offices on the implementation and post implementation phases of funded FMR Projects.

Specifically, the FMRDP-PMO, BAFE and RAEDs shall provide assistance and necessary information to, and ensure with DPWH on the following:

1) Implementation Phase:

- a) *Survey and Staking* - The FMRDP-PMO shall submit and provide the DPWH-Central Office with geotagged locations of the approved FMRs. The RAED together with the DPWH-District Engineering Office (DEO) shall conduct site survey and staking with the presence of concerned LGU and/or proponent group to ensure participatory validation and concurrence.

b) *Detailed Engineering Design (DED) and Program of Works (POW) Preparation:*

- b.1. The RAED shall secure from DPWH-DEO a copy of the DED and POW prior to procurement. Within three (3) days upon the receipt of the said documents, the DA Regional Director shall issue a No Objection Letter to DPWH-DEO.
- b.2. The DED, POW, Detailed Unit Price Analysis (DUPA), Construction Schedule and other supporting documents for each project/road segment to be prepared by DPWH shall be in accordance with the existing design standards and specifications of DPWH as well as that prescribed by the Philippine Agricultural Engineering Standards (PAES)/Philippine Agricultural and Biosystems Engineering Standards (PABES) or PNS:PABES for FMR. (Annex F indicates the prescribed minimum design standards for FMR)
- b.3. All FMRs shall be constructed to Portland Cement Concrete Pavement (PCCP) type to ensure access to all weather road that has longer economic life and lower maintenance cost;
- b.4. Inclusion of FMR slope protection structures using coconet or bioengineering technologies; and
- b.5. Promotion or adoption of polymer-based soil stabilizer pursuant to Item 206, Volume II of the DPWH Standards Specifications for Highways and Bridges and Airports- Chemically Stabilized Road Mix Sub-base/Base Course, aimed to reduce the cost of FMR construction;

c) *Procurement Process*

- c.1. The DA-RFO may send its RAED's representative who is knowledgeable on procurement process, an Agricultural and Biosystems Engineer, to attend during the conduct of procurement, as observer.
- c.2. The RAED shall secure from DPWH-DEO copies of procurement documents such as construction plans, POW, Approved Budget for the Contract (ABC), Detailed Unit Price Analysis (DUPA), Resolution of Award, Notice of Award (NOA), Bill of Quantities (BOQs)/Unit Bid Price Analysis, Notice to Proceed (NTP), and Contract Agreement for ready reference.

d) *Materials Testing and Quality Control (MTQC)*- The DPWH-DEO shall ensure that all materials used in the FMR projects have passed the minimum material testing requirements. Prior to the construction, the RAED shall secure a copy of the test reports from DPWH or other DPWH accredited testing centers for ready reference, including the pouring permit and to witness concrete pouring and placing activity.

e) *Signage and Marker*

- e.1. Signboards as prescribed by DA (Annex G) showing the DA Logo shall be posted at conspicuous places at the beginning and end of the FMR section as per Commission of Audit (COA) Circular No. 2013-004 dated 30 January 2013. Ensure with DPWH-DEO that the signboards will remain in place throughout the project duration.

- e.2. The FMR Marker shall be placed at the beginning of the project, beside the shoulder and shall conform to the prescribed specifications as indicated in Annex H.

f) *Monitoring and Progress Report Documentation*

- f.1. The RAED shall secure a copy of the monthly progress report (complete with latest photo) from the DPWH-DEO and copy furnish the FMRDP-PMO. Then the RAED or as deemed necessary with FMRDP-PMO, shall monitor the implementation of the FMR projects based on the submitted reports. The BAFE in coordination with FMRDP-PMO shall formulate the monitoring guidelines;
- f.2. The DA-RFO shall copy furnish the concerned Barangay/Municipal LGU with the DED and Bill of Quantities (BOQ) for its own monitoring of the project progress;
- f.3. The RAED shall facilitate the documentation of consolidated FMR reports and reflect it in the FMR Registry of ABEMIS. All documents generated and transmitted shall be consolidated, filed, and bound on the prescribed manner (Annex I);
- f.4. The BAFE in coordination with FMRDP-PMO shall collaborate with the Information and Communication Technology Service (ICTS) on the updating of FMRDP Web page in the Department of Agriculture Official Website.

- g) *Constructors Performance Evaluation System (CPES)*- The BAFE shall coordinate with DPWH for the conduct of CPES for the approved FMR projects. In order to complement the DPWH CPES, the DA-RFO however, may request PCAF, the DA CPES Implementing Unit (CPES-IU) to conduct CPES as deemed necessary to evaluate the performance of the Constructors based on the NEDA-approved CPES guidelines.

2. Post Implementation Phase

a) *Completion*

- a.1. After the completion of the project, the DA-RFO, DPWH-DEO and recipient LGU shall conduct a joint inspection to ensure the full delivery of the items/works specified in the contract and assess the status and condition of the road. Based on the result of the inspection, the DA-RFO shall secure a copy of the inspection report from the DPWH-DEO for any deficiency and recommend any appropriate action (e.g., price adjustment repair or removal and replacement, as the case may be). Before final inspection the DA-RFO and DPWH-DEO shall jointly conduct punchlisting inspection. Authorized representatives of the DPWH-DEO and the DA-RFO shall sign the Final Inspection Report and copy furnish the FMRDP-PMO.
- a.2. After complying the findings as stated in the Final Inspection Report, the concerned RAED shall secure the Certificate of Project Completion and Certificate of acceptance from the DPWH-DEO. The DPWH-DEO shall also issue the Certificate of Acceptance after the one-year Defects Liability Period (DLP) duly concurred by the DA-RFO.

- a.2. After complying the findings as stated in the Final Inspection Report, the concerned RAED shall secure the Certificate of Project Completion and Certificate of acceptance from the DPWH-DEO. The DPWH-DEO shall also issue the Certificate of Acceptance after the one-year Defects Liability Period (DLP) duly concurred by the DA-RFO.
- a.3. Upon the project completion, the DA-RFO shall secure a copy of the Terminal Report and its attachments (i.e. signed Certificate of Completion and Certificate of Acceptance) from the DPWH-DEO and copy furnish the FMRDP-PMO.

b) Acceptance and Turnover

The DA-RFO and DPWH-DEO shall jointly turnover the management and ownership of the FMR project to the local government unit. The latter shall commit to shoulder the operation and maintenance cost of the FMR through a MOA.

The DA shall execute a Memorandum of Agreement (MOA) with DPWH for the implementation of the FMR. Part of the MOA shall be the issuance of DA-DPWH Joint Circular on FMR implementation.

SECTION 9. *Monitoring and Evaluation*- The semi-annual monitoring and evaluation after the DLP shall be conducted by the FMRDP-PMO, BAFE and the DA-RFO Regional Operation and Maintenance Audit Team (ROMAT) to assess the status and condition of the of the project and the compliance of the MOA for the Operation and Maintenance.

SECTION 10. *Geo-Tagging of FMRs*- All FMR projects are required to have a geotagging reference before, during, and after completion of the project. (Please see ANNEX J— Guidelines on Geotagging)

SECTION 11. *FMR Network Planning*- 1) The RAED shall spearhead the preparation of FMR Network Plans in all agri-fishery based barangays of the municipalities within the province or cities of their respective regions in coordination with appropriate offices of the LGUs. This includes the inventory and location of barangay roads, sitio roads and other farm access roads (surface type either earth, gravel or concrete in km/shapefiles) within the agri-fisheries production areas. The road networks are overlaid to the Municipal/City Comprehensive Land Use Plan and the Municipal/City Local Road Network Plan, indicating the future land use of road location. As such, Municipal or City FMR Network Plans shall be prepared.

- 2) The RAED shall tap the assistance of and collaborate with the LGU's Agricultural and Biosystems Engineering Groups, SCUs and the Philippine Society of Agricultural and Biosystems Engineers in the preparation of FMR Network Plans;
- 3) The BAFE shall coordinate with the DILG for the inclusion of FMR Network Plans in the on-going preparation of the LGUs Local Roads Network Development Plans (LRNDP);

- 4) Provincial Road Network Plan involves consolidation the municipal/city FMR network plans. The list of barangay road networks shall be counter checked with the Provincial Development and Physical Framework Plan (PDPFP), Local Road Network Plan (LRNDP), Provincial Commodity Investment Plan (PCIP) and Value Chain Analysis (VCA) to identify the prioritized agricultural areas of growth at macro level. Agricultural Sector Analysis shall be undertaken using SAFDZ maps, suitability maps, soil maps, ground water maps, agri-fisheries infra location inventory, agri-machinery location inventory, and irrigation inventory;
- 5) Regional FMR consolidation of provincial road network plans will provide a macro level perspective which will be used for regional FMR investment planning.
- 6) National consolidation and review of Regional FMR Network Plan will be done by BAFE.

SECTION 12. Variation/Extra Work/Change Order/Termination- 1) In case of change of location of approved FMR projects, and unless otherwise authorized in the special provisions of GAA of the current Fiscal Year; the DA Secretary is authorized to make modifications provided that:

- a) The allotment released has not been obligated;
 - b) Changes may only be done once except if due to the occurrence of calamities;
 - c) The alternative proposal which the proponent shall endorse is included in the list of validated and qualified proposals submitted by the DA-RFO;
 - d) Changes are within the same legislative district; and
 - e) Changes will be undertaken by the same Implementing Unit.
- 2) In case of variation, the DA-RFO shall secure a copy for the revised DED and POW and submit a No Objection Letter to DPWH-DEO. For suspension, and time extension, the DA-RFO shall secure a copy of the approved Notice of Suspension and Resume Order, Notice of Time Extension, and other related documents from the DPWH-DEO;
 - 3) In case of termination of projects, the DPWH shall similarly secure the concurrence of FMRDP-PMO with attached justifications;
 - 4) Savings incurred from the project may be utilized for the same project while savings generated from terminated projects may be used to augment FMRs listed and funded on the same year, with the recommending approval of the DA Secretary but subject to the approval of the DBM and accounting and auditing rules and regulations.

SECTION 13. Institutional Arrangement- The functions and responsibilities of various DA units are as follows:

- 1) *Farm-to-Market Road Development Program Management Office (FMRDP-PMO)*

An FMR Development Program Management Office (FMRDP-PMO) is hereby created which shall be responsible in the over-all supervision on the implementation of FMR projects of DA and coordination works with DA-RFOs, BAFE and various DA operating units, DPWH and other concerned government agencies. The FMRDP-PMO shall be headed by a Program Director which shall be supervised by an Undersecretary, both are designated by the Secretary of Agriculture. Specifically, the FMRDP-PMO shall have the following functions and responsibilities:

- a) Preparation of budget allocation per RFOs which will be submitted to DBM for inclusion in the next Fiscal Year (FY) NEP;
- b) Evaluation or review of the prioritized list of FMR projects endorsed by the RFOs and ensure completeness of the requirements prescribed by this guidelines. The prioritized list of FMR proposals with their rankings shall be included in the pipeline or list of FMRs for funding, and submit the consolidated prioritized proposal to the Secretary for subsequent endorsement to DBM and DPWH;
- c) Ensure that the ongoing construction of the FMR projects are properly and adequately monitored by RAEDs so that the standard set forth by the DPWH is observed by the contractors.
- d) As deemed necessary, monitor FMR projects funded under the Regular Funds or under the General Appropriations Act (GAA), inspect the road quality and geotag the completed project to ensure that the FMR project is implemented in the correct road section by counter-checking its coordinates in the validation conducted before the implementation of the project.

The FMR-PMO shall likewise compose of technical and administrative personnel, and the provision of funding and other logistical support for its operation.

2) *Bureau of Agriculture and Fisheries Engineering (BAFE)*

Pursuant to Section 24 of RA No. 10601 and DA AO No. 05, Series of 2020, the BAFE shall, among others:

- a) Establish and maintain a national database (ABEMIS) of FMR projects implemented by the various DA bureaus, attached agencies, Regional Field Offices (RFO), as well as other national government agencies and Local Government Units (LGU);
- b) Spearhead the preparation and updating of Farm-to-Market Road Network Plan in collaboration with FMRDP-PMO, DA RFO-RAEDs and other concerned DA bureaus and attached agencies/corporations;
- c) Prepare and update the FMR validation, design and construction protocols in coordination and collaboration with DPWH, PRDP and FMR-PMO;

- d) Coordinate and collaborate with the Bureau of Agricultural and Fisheries Standards (BAFS) in the development and/or updating of the Philippine Agricultural and Biosystems Engineering Standards (PABES) for FMR;
- e) Coordinate, oversee and monitor the conduct of Constructors' Performance Evaluation System (CPES) of DA funded FMR projects; and
- f) Conduct capacity building program with ATI for Agricultural and Biosystems Engineers and other FMR workforce of DA, LGUs and other agencies on FMR design and implementation;

3) *Department of Agriculture Regional Field Office (DA RFO)*

The DA Regional Field Offices (RFOs) through the RAED shall serve as the DA field implementing arm of FMRDP-PMO. The RAEDs shall:

- a) Validate all proposed FMR projects in their respective regions from various proponents using the geo-tagging guidelines;
- b) Prepare validation reports indicating the results, whether the proposed project is technically feasible or not;
- c) Regularly updates the information provided in the ABEMIS;
- d) Prepare endorsement letter of the Regional Director on the list of FMR projects to the FMRDP-PMO for further review and approval of the Secretary;
- e) Monitor the implementation FMR projects in coordination with DPWH-DEO;
- f) Prepare regular progress report for submission by the Regional Director to the FMRDP-PMO; and
- g) Provide assistance to FMRDP-PMO and BAFE in the performance of their functions.
- h) Coordinate and collaborate with the Agricultural and Biosystems Engineering Groups of LGUs in the field implementation of FMR projects.

The Regional Director shall ensure that the prioritized FMR projects endorsed to FMRDP-PMO for approval by the Secretary have complied all the requirements prescribed by this guidelines.

4) *DA- Information & Communication Technology Service (ICTS)*

The DA ICTS shall serve as the service provider for the data of Farm-to-Market Road Information System in ABEMIS.

5) *Philippine Council for Agriculture and Fisheries (PCAF)*

The PCAF as the advisory body and the Constructors Performance Evaluation System Implementing Unit (CPES-IU) of Department of Agriculture shall facilitate the conduct of CPES Evaluation for FMR projects using the DA Department Circular No. 1, Series of 2019 re: "Guidelines for the Implementation of CPES at Department of Agriculture".

Moreover, the PCAF shall facilitate the conduct of participatory monitoring and evaluation of the completed FMR projects by the Agricultural and Fisheries Councils (AFCs).

Please see Annex K for the Operational Structure of FMRDP

SECTION 14. *Funding* – The funding necessary for the implementation of this AO shall be included in the annual planning and budgeting proposals under the GAA by the DA, BAFE, and its other concerned bureaus, attached agencies/corporations and DA-RFOs.

SECTION 15. *Separability Clause* – If any section or provision of this AO is held or declared unconstitutional or invalid by a competent court, the other sections or provisions hereof shall continue to be in force as if sections or provisions so annulled or voided had never been incorporated herein.

SECTION 16. *Repealing Clause* – All DA administrative issuances or parts of said administrative issuances inconsistent with this AO are hereby revised, amended, modified and/or superseded as the case may be by this AO. DA Administrative Order No. 4, series of 2016 is hereby expressly repealed.

SECTION 17. *Effectivity* – This issuance shall take effect fifteen (15) days after publication in the Official Gazette or in one (1) newspaper of general circulation.

APPROVED this 9 day of MAY 2020.


WILLIAM D. DAR, Ph.D.
Secretary *av*

DEPARTMENT OF AGRICULTURE
In replying pls cite this code :
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Received : 05/08/2020 11:22 AM



Republic of the Philippines
OFFICE OF THE SECRETARY
Elliptical Road, Diliman
1100 Quezon City

January 31, 2023

ADMINISTRATIVE ORDER

No. 01
Series of 2023

SUBJECT : AMENDMENT TO ADMINISTRATIVE ORDER (AO) NO. 16, SERIES OF 2020 RE: REVISED GENERAL GUIDELINES ON THE IMPLEMENTATION OF THE DEPARTMENT OF AGRICULTURE FARM-TO-MARKET ROADS DEVELOPMENT PROGRAM

The following provisions of Administrative Order No. 16, Series of 2020 are hereby amended:

1. **SECTION 4.e** is hereby changed to "**Section 5.2.j**". The endorsement from the Regional Development Council that the project is part of the Regional Development Plan will be required after the project has been validated and found feasible for funding.
2. **SECTION 5.2.j** is added to read as:

"j) Endorsement from the Regional Development Council that the project is part of the Regional Development Plan (RDP). The concerned DA RFO shall coordinate, secure and validate this with their respective NEDA Regional Office."
3. **ANNEX A.5** is hereby deleted.
4. **ANNEX D.10** is added to read as:

"10. Endorsement from the Regional Development Council that the project is part of the Regional Development Plan (RDP)."

All other provisions in Administrative Order No. 16, Series of 2020 shall remain the same.

This Order shall take effect immediately.

Done this 7th day of February, 2023

DOMINGO F. PANGANIBAN
Senior Undersecretary



DA-CO-OSEC-AO20230131-00003

BY RECEIVED DIA
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1100 QUEZON CITY

**JOINT ADMINISTRATIVE ORDER**No. 01

Series of 2023

SUBJECT : FORMULATION, IMPLEMENTATION, AND UPDATING OF THE NATIONAL NETWORK OF FARM-TO-MARKET ROADS

RATIONALE:

As defined by Section 4 of Republic Act No. 8435 or the "Agriculture and Fisheries Modernization Act of 1997", farm-to-market roads (FMRs) are roads linking the agriculture and fisheries production sites, coastal landing points and post-harvest facilities to the market and arterial roads and highways. Specifically, these FMRs are local roads such as (provincial, city, municipal, and barangay roads) including farm roads.

The quality and quantity of these FMRs have a big impact on transport costs for farmers; good roads close to farms lower production costs and raise the prices that farmers get for their products.¹

The Department of Agriculture (DA) together with the Department of Public Works and Highways (DPWH) undertake the planning and implementation of the Farm-to-Market Road Development Program (FMRDP). Other agencies or inter-agency collaboration programs that plan, fund, and implement roads network that also passes through the agricultural production areas and support the establishment of a national network of FMRs include the Local Government Units (LGUs) for local roads, the reformulated Department of Trade and Industry (DTI) – DPWH Covergence Program on Roads Leveraging Linkages of Industry and Trade (ROLL-IT) 2.0 – Logistics Efficiency and Transport Seamlessness to Enhance Agribusiness Trade (ROLL IT 2.0 – LETS EAT), the Department of Tourism (DOT) – DPWH Covergence Program on Tourism Road Infrastructure Program (TRIP) for roads leading to tourist sites, Department of the Interior and Local Government (DILG) for supplemental funding to local roads improvement, among others.

During the First State of the Nation Address (SONA) of the President last July 25, 2022, His Excellency Ferdinand R. Marcos, Jr. directed the national government, in particular, the DA and DPWH to formulate a National Network of FMRs which shall link the production areas to the markets. The President likewise emphasized the need for road development leading to tourist destinations, even in remote areas for the convenience of travelers and tourists around the country to help promote undiscovered tourist spots.

In view of these, there is a need to consolidate and integrate the efforts of concerned agencies for the formulation and implementation of the National Network of FMRs.

¹ World Bank Public Expenditure Review, June 2021, "Mandanas Ruling and Potential Implications for the Farm-to-Market Road Development Program"

SECTION 1. Coverage. This Joint Administrative Order covers the following:

- 1) Establishment and maintenance of FMR common database through the ABEMIS and GeoAgri System;
- 2) Formulation and updating of Farm-to-Market Road Network Plan at the national and local levels (regional, provincial, city, and municipal); and
- 3) Formulation and updating of national and local FMR network investment plans.

SECTION 2. Definition of Terms:

- a) *Farm-to-Market Road* refers to roads linking the agriculture and fisheries production sites, coastal landing points and post-harvest facilities to the market and arterial roads and highways.
- b) *FMR Network Plan* refers to a systematic list of proposals detailing the integrated connectivity of FMRs that links identified agri-fishery production areas, processing, and other agriculture-related infrastructure, trading posts, local markets and agri-tourism sites with the local core road network and national highways. The FMR Network Plan is supplementary to the Local Roads Network.
- c) *GeoAgri* (<http://geoagri.da.gov.ph/>) is an in-house web-based system jointly developed by the Bureau of Agricultural and Fisheries Engineering and Caraga State University to consolidate the information on FMR projects. It is envisioned to be the common portal for all Government Agencies and LGUs implementing FMRs which promotes transparency, governance, maximized resource allocation, and minimized duplication and overlapping of projects.
- d) *ABEMIS* (<https://abemis.da.gov.ph/>) is an in-house developed web-based information system that serves as the central data repository and a monitoring tool of all Agricultural and Fisheries Machinery and Infrastructure projects of the DA. This helps accelerate the monitoring of project implementation from the proposal, validation, procurement, construction, and completion to operation.

SECTION 3. Data Handling and Management

The DA through the Bureau of Agricultural and Fisheries Engineering (BAFE) shall spearhead the consolidation of all programs and projects inputted in the National Farm to Market Road Network Plan (FMRNP). The DA-BAFE manages the repository of the data and ensure security and data integrity from its use, storage, or disposal. The DPWH, DILG, DTI, and DOT are liable for any inputs made (or subsequent outcome of decision) based on the provided data, and/or products derived based on data. The DA shall not redistribute nor use the data provided by the partner agencies to any non-partner agency or private sector without written consent from the contributing party, consistent with the Data Privacy Act and Freedom of Information Act and their implementing guidelines.

SECTION 4. National and Regional Coordination and Monitoring Committees. To ensure the proper implementation of this Joint Administrative Order, National and Regional Coordination and Monitoring Committees are hereby created composed of the DA as Chairman, the DPWH as Vice-Chairman and Members are the DOT, DTI and DILG.

At the national level, the representative of DA, DPWH, DOT, DTI and DILG duly designated by their respective Secretary shall have a position of least a Bureau Director and involved in the planning and implementation of FMRs. At the regional level, the representative of these agencies shall be the Regional Director or the Division Chief in-charge of FMRs. In the case of DA, the Regional Executive Director or Head of the Regional Agricultural Engineering Division (RAED) while the DPWH is the Regional Director and/or District Engineers.

The Committee shall ensure harmonization and complementation in the planning and implementation of FMRs at the national and local levels. It shall consolidate, integrate and review FMRs public investments at the national and local levels.

A representative from NEDA shall be invited during the committee meetings to ensure alignment of FMRNP with the approved Philippine Development Plan (PDP).

The BAFE shall serve as Secretariat of the Committee at the national level and DA-RAED at the regional level.

SECTION 5. *Roles and Functions of the Involved Agencies*

a) Department of Agriculture (DA)

The DA through the BAFE shall spearhead the formulation and updating of the National Network of FMRs Master Plan and coordinate and monitor its implementation. Specifically, it shall:

- 1) Facilitate orientation seminars for the members, as well as LGUs and other stakeholders in relation to the plan and the DA-FMRDP Guidelines;
- 2) Identify the FMR proposed sites and conduct, through its Regional Field Office (RFO), field validation and geotagging in accordance with the DA-FMRDP Guidelines;
- 3) Consolidate all data submitted by the various agencies and manage the ABEMIS and GeoAgri System; and
- 4) Share FMRDP-related data and access ABEMIS and GeoAgri System information system with DOT, DTI, DPWH, and DILG.

b) Department of Public Works and Highways (DPWH)

The DPWH shall provide and share to the DA relevant data pertaining to national highways, arterial roads and other roads funded and implemented by the DPWH for the DA to include and integrate the same in the National Network of FMR. It shall also provide and manage quality infrastructure facilities and services responsive to the needs of the Filipino people in the pursuit of national development objectives. It shall:

- 1) Through its Regional/District Engineering Offices (ROs/DEOs), depending on the limit of authority set by the DPWH, be responsible for preparing the standard design/specifications, cost estimates (POW and DUPA), work

duration, and other supporting documents for each FMR on the basis of the list submitted by the DA and based on the approved standards of the DA (Philippine Agricultural Engineering Standards) and DPWH.

- 2) Provide the list of DA FMR projects every 5th working day of the month in an open format (e.g., CSV) via email to da.fmrdep@gmail.com with the following data among others:
 - a) Status (Ongoing, Completed, Terminated, Not-yet Started).
 - b) Percent (%) accomplished.
- 3) Furnish the DA an inventory of national roads per projects funded and implemented by it for consolidation to the ABEMIS or GeoAgri System every end of the quarter.

c) Department of the Interior and Local Government (DILG)

The DILG is responsible in ensuring the full support and participation of the LGUs in the formulation and updating of local FMR Network plan and its implementation at the provincial, city, municipal and barangay levels. It shall:

- 1) Ensure and monitor the LGU's compliance with their roles and responsibilities mandated by RA No. 8435 and the Local Government Code with regards to the construction, repair, rehabilitation and maintenance of provincial, city, municipal and barangay roads within the agricultural production areas;
- 2) Fully support the development and updating of FMR Network Plans as a component of the DILG's Local Roads Network Development Plans;
- 3) Include LGU's support on FMRDP as one of the criteria in the Seal of Good Local Governance (SGLG);
- 4) DILG, through its Regional Offices, be responsible for updating the road conditions of local roads;
- 5) Provide the updates in the ABEMIS or GeoAgri System every end of the semester and the road condition map (local roads consisting of the provincial, municipal, city, and barangay);

Department of Tourism (DOT)

With the existing convergence program with DPWH between the DOT and DPWH called the Tourism Road Infrastructure Program (TRIP) funded by the latter, the DOT shall provide the DA and the DPWH with an updated list of tourism development areas, destinations, and DOT-accredited establishments consistent with the updated National Tourism Development Plan (NTDP). In relation, the DOT, DPWH and DA shall ensure that no road project duplication occurs under TRIP and FMRDP.

Department of Trade and Industry (DTI)

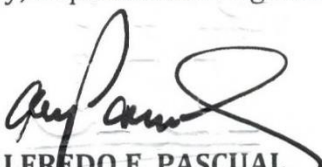
The DTI is responsible for assisting DA in the scanning and inventory of establishments classified under various definitions of "markets". DTI shall also coordinate the activities and projects of the ROLL IT Program, and the ROLL IT 2.0-LETS EAT Programs as they relate to the National FMRNP with the FMR National Coordinating and Monitoring Committee, and update the ABEMIS and GeoAgri System every end of the semester. The DTI, the DPWH, and the DA shall ensure that there shall be no duplication of road projects under the ROLL IT Program, ROLL IT 2.0- LETS EAT Program, and FMRDP.


SECTION 6. Funding. The funding necessary for the implementation of this JAO shall be included in the annual planning and budgeting proposals under the GAA by the DA, DOT, DILG, DPWH, and DTI.

SECTION 7. Effectivity. This Joint Administrative Order shall take effect immediately.


APPROVED this 16th day of February 2023.

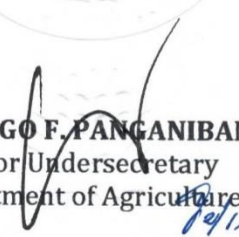
H.E. FERDINAND R. MARCOS JR.
President, Republic of the Philippines and
Secretary, Department of Agriculture


ALFREDO E. PASCUAL
Secretary
Department of Trade and Industry


MANUEL M. BONOAN
Secretary
Department of Public Works and Highways


ATTY. BENJAMIN C. ABALOS, JR.
Secretary
Department of the Interior and Local Government


MARIA ESPERANZA CHRISTINA GARCIA FRASCO
Secretary
Department of Tourism


DOMINGO F. PANGANIBAN
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