

Rice is life for almost half the planet's population.

Each day, millions of poor around the world depend on it for food and employment.

About 70 per cent of the world's 1.3 billion poor live in Asia where many depend on rice for their very survival.

But rice also touches the lives of many more people in Africa and South America, and their numbers continue to grow.

By 2025, there will be another 650 million rice consumers in Asia alone - that's another 32 million new mouths to feed every year.

And Asia's farmers will have to produce the millions of tons of extra rice needed using far less land, labor and water.

Competition for these vital resources is already intense, forcing rice farmers to produce much more with much less.

It's a tremendous challenge, but it's not the only battle – or the most important one.

That's because most of the world's rice farmers, and the landless laborers they employ, are also trapped in poverty.

A better future for them – and the world - depends on rice.

Without plentiful rice supplies to keep retail prices low, the food security and livelihoods of millions of poor are all under threat.

And then there's the environment.

Can poor farmers continue to feed the world's millions of rice consumers with rice sustainably and safely?

History suggests they can.

The lessons and successes of the Green Revolution show what can be achieved with good science and give reason for hope.

Protecting and sustaining the environment should always be an essential part of any nation's food security strategy.

That's because rice covers most of Asia's best agricultural land, and uses vast quantities of water – two vital resources that are increasingly in short supply.

Rice farmers can no longer use the 3,000 liters of water they may have needed to produce just one kilogram of rice.

Fortunately, modern rice varieties that are more water-efficient are already starting to reduce water use.

Those that have built-in resistance to pests and disease have also started to significantly cut pesticide applications.

And, high yielding varieties have saved thousands of hectares of rainforest from being converted into rice paddies.

But farmers still need help – and the best and latest technologies - to grow the extra rice that future generations will need.

The International Rice Research Institute, or IRRI as its known, has been helping poor rice farmers and consumers since it

was founded in 1960 by the Rockefeller and Ford Foundations, in partnership with the Philippine government.

For more than 40 years, IRRI and its many partners have been using the best science to develop new technologies to help the world's rice growers.

These are freely shared by IRRI with its national partners as international public goods to help improve the lives of almost three billion rice consumers.

By introducing modern science and farming technologies to the rice fields of Asia, IRRI and its partners around the world helped launch the Green Revolution.

The advanced and intensive production techniques that followed were major successes, providing the food security foundation needed for Asia's modern prosperity and stability.

Now, the challenge is to help rice farmers escape from poverty while still providing the affordable, nutritious rice the world needs.

IRRI's research program addresses these challenges using a comprehensive, interdisciplinary approach that involves every major stakeholder in the rice industry.

It places special emphasis on vitally important strategies like sustainability, capacity building and environmental sensitivity.

All IRRI technologies are also considered international public goods because the Institute is committed to keeping them freely available within the public domain.

IRRI works as well with the private sector to secure access to even more technologies that could help poor farmers.

At IRRI, the tools of biotechnology and rice genome research are offering exciting, new opportunities to solve many of the problems that confront rice farmers.

By focusing on the genetic building blocks of rice, scientists have accelerated the development of new rice varieties that help farmers improve their lives.

But biotechnology is just one scientific tool that IRRI uses to fight poverty and food insecurity.

From traditional plant breeding to natural resource management, from the social sciences to training and extension, IRRI is committed to providing exciting, innovative and sustainable new options for poor rice farmers everywhere.

But the most important and essential of all IRRI's research starts here.

The International Rice Genebank is the well protected and carefully managed home of more than 100,000 samples of wild and cultivated rice from around the world.

It's taken more than 40 years and the friendly cooperation of many governments to create this unique facility as well as the work of hundreds of dedicated collectors.

It's the last line of defense between Asia and possible famine and has helped nations such as Cambodia and East Timor re-build their rice industries after years of war and social disruption.

Each day, researchers from around the world access this priceless resource through a 30 year-old international network that is a vital foundation of international food security.

The genebank helps them develop more productive rice varieties that can resist such age-old problems as pests and disease — and perhaps one day even drought and salt water.

Another fundamental reason for IRRI's success and impact is its many partners and networks in the world of rice.

The Institute has spent almost half a century building a global network of partnerships and collaboration that is unrivalled in the international rice industry.

First and foremost is IRRI's relationship with the world's rice farmers.

IRRI is linked to farmers through the national agricultural research and extension systems in rice producing countries.

While NGO's provide innovative alternatives to IRRI's traditional partners, further boosting the overall impact of important new technologies.

But who pays for all this?

IRRI is funded by the governments of more than 15 nations as well as several private foundations and international organizations.

Surprisingly, many of IRRI's most committed donors are western nations who are not big rice producers or consumers.

But over the past decade, competing donor priorities have caused IRRI's budget to shrink by almost half.

Still, for the cost of just one jet fighter each year, the Institute continues to play a key role in the food security of almost three billion rice consumers worldwide.

And to extend its impact even further, IRRI has turned to the Internet.

The Rice Knowledge Bank is one of the world's first digital extension services for rice farmers.

It's a comprehensive, digital rice-production library freely available to anyone, anywhere, anytime that builds on the impressive achievements of the IRRI library, one of the world's largest collections of rice-related literature

But this is just the latest training innovation from IRRI.

More than 14,000 rice-producing personnel from around the world have gained from the training courses offered by the institute and each year hundreds more continue to benefit.

As the world heads into a new millennium, IRRI and its partners remain as committed as ever to achieving even more impact and helping the world's rice farmers improve their lives.

For many, the United Nations Millennium Development Goals are a road map to a better future for the world's poor.

But so much more needs be done if we are to achieve these goals.

Using the best science and the most sustainable technologies, IRRI and its partners are providing a better future for those poor rice farmers who may otherwise be left behind.