

# RICE LANDS: STILL UNDER SIEGE

"Rice means life to us in Asia. It has been the cornerstone of our food systems, our languages, our cultures and our livelihoods for thousands of year"

# A FEW FACTS ABOUT RICE CULTURE IN ASIA:1

- Rice is the most popular food grain across the world providing food for more than 1.6 billion people
- Asia is considered the rice bowl of the world
- 135 million hectares of agricultural land are devoted to rice cultivation in Asia
- More than 140,000 varieties of cultivated rice are believed to exist
- Approximately 3 billion people depend on rice for food & livelihood
- In Asian countries, Rice is synonymous with Life

#### **ISSUES OF CONCERN**

- Rice farmers are amongst the poorest in many countries, often lacking ownership over the rice lands they cultivate
- In Asia, rice lands are largely at risk due to conversion and degradation
- Rice farmers are increasingly faced with evictions and loss of livelihoods
- Evictions of rice farmers are often marked by brutal violations of human rights
- Indigenous rice production is being systematically destroyed across the continent<sup>2</sup>
- With the decrease in rice lands, Asia has lost the majority of its rice varieties
- The recent food price crisis has further marginalized the poor rice farmers of Asia and led to rice price increases of over 100% in one year

# ASIA: THE RICE BOWL OF THE WORLD

Asia produces 90% of its rice in an area approximately 134,544,000 hectares in size and consumes most of this output (IRRI 2004). The rice belt in Asia is spread over the countries of China, India, Bangladesh, Indonesia, Vietnam, Thailand, Japan, Myanmar and the Philippines. These Asian countries are the top producers and consumers of rice in the world.<sup>3</sup>

Rice is the backbone of the rural economy and in cumulative terms, accounts for up to half of Asia's farm incomes. Rice is the staple food of poor households and supplies nearly 80% of people's daily calories across the continent.<sup>4</sup>

Rice has further shaped the social, cultural, religious and political environment of Asia. It has given birth to a 'way of life' or 'culture' over a period of thousands of years, and determines the livelihoods of more than 70% of the continent's population.<sup>5</sup> Rice is worshipped in almost all Asian countries as a symbol of wisdom, wealth, fortune and life. For example, in India, it is known as "dhanya" meaning "the sustainer of the human race."

### RICE LANDS IN ASIA: THE KEY SOURCE OF LIVELIHOOD

Most of the rice lands in Asia are small and marginal holdings. Rice is grown under various conditions, at different altitudes and in different soils across the continent.

Rice land has immense political, economic and social significance.

Ownership of rice land in rural Asia determines the social and economic position of a household in terms of rural power setting. Access to good quality land, proper irrigation facilities, availability of support services and access to the market shape the livelihood security of millions of rice farmers.<sup>6</sup> Rice land remains the single most crucial resource for the rice farmers of Asia.

## RICE FARMERS: THE HANDS THAT FEED US REMAIN EMPTY

Large numbers of rice farmers across the continent are poor marginal farmers, share croppers or landless agricultural labourers. The majority of rice farmers in Asia is deprived of land.

Country-specific data reveal that in Asia, approximately 72% of rice farmers belong to the marginal category. Peasant women (who constitute 50% of rice farmers) have the least access to land and lowest level of control over productive resources.<sup>7</sup>

Land distribution patterns in rural settings are marked with inequality and discrimination, and are based on social position, political and economic power, gender and caste.

This pattern can be traced back through history and more recently to the colonial past, when accumulation of land by powerful rural actors was encouraged and supported by colonial rulers to maximise their own profit. Lacking access to resources and assets, the vicious cycle of poverty and perpetual landlessness

## Singur rice farmers struggling in a battle of life and death

An eastern state of India. West Bengal, is well known for rice production in the country. In 2007, in the Hooghly district of West Bengal in an area known as Singur, more than 15.000 rice farmers lost their livelihoods due to the invasion of a TNC. Tata. which moved into the area to construct a car manufacturing unit. Approximately 1,000 acres of multi-cropping fertile rice lands were handed over to Tata by the state, even before the farmers could reap their last harvest. The construction unit of Tata destroyed the crop, and with the help of the police. the area was fenced in. When rice farmers raised their voices against this mindless land acquisition, the government unleashed a series of policing, terrorizing, raiding and ransacking assaults on the people of Singur for over a period of seven months. Houses were burnt down, children and women ruthlessly beaten up and the area turned into an inferno.

Singur is not an isolated incident; the ruling party in West Bengal is bent upon pursuing a neo-industrial policy in line with a neo-liberal agenda. This has instigated serious conflicts all over the state on issues related to access and ownership of land. The proposed Special Economic Zones in Nandigram threaten to evict more than 100 villages of poor peasants. The battles over land in West Bengal have claimed more than 100 lives so far. If fully implemented, the industrial policy of the West Bengal government will destroy 25,000 hectares of rice land in the next couple of years, evicting thousands of rice farmers.

Both in Singur and Nandigram, rice farmers' movements against land alienation have been to some extent successful and the state government has been forced to either drop the project (in Nandigram) or to keep it in abeyance (in Singur). In a recent development, the government of India announced that no rice land will be expropriated for developing industrial zones or special economic zones. 'People over profit' should be the basis of national policies.

has been allowed to continue among poor farmers.

## NEO-LIBERAL ONSLAUGHT ON RICE LANDS: OLD THREATS IN NEW FORMS

Few changes took place in the post colonial period, as colonial rulers were replaced by the ruling national parties/powers, meaning that the rural power structure has remained much the same. Most Asian countries have failed to adequately address the inherent structural inequity and socioeconomic gaps in rural areas, thereby leaving land distribution patterns as skewed as ever. As a result, the marginalisation of rice farmers has continued and their vulnerability has increased.

With changes in the global, political and economic scenario, poor

rice farmers have started facing old threats in new forms, such as further evictions and displacement. The new threats are emerging from neo-liberal policies which have been main-streamed in most Asian countries over the last decade.

Specifically, neo-liberal policies are advocating globalisation, free trade and open market industrial order. These new policies have initiated a process of neo-colonisation and have contributed to the intensification of poverty, hunger and landlessness among rice farmers in Asia and other Third World countries.

# OUR LAND, THEIR DEVELOPMENT

Neo-liberal policy-makers argue that 'development' (a euphemism for profit for transnational companies or

TNCs) requires sacrifice, so rice land needs to be converted. They claim that rice farmers also stand to benefit, however, the reality is that many end up working as wage labourers in factories or unorganized sectors or worse, die of hunger.

Precious rice land is being lost to industrialisation and urbanization in many Asian countries. Rice farmers are removed from their livelihoods, become victims of forced migration and suffer from hunger. Invasions of rice lands by foreign investors have been encouraged by the nation states as well as by global actors like World Bank (WB) and the International Monetary Fund (IMF), in line with the neo-liberal open market policies.<sup>8</sup>

Rice land is invaded for the construction of Special Economic Zones (SEZ), Export Processing Zones (EPZ), new industries and housing estates. These invasions have given rise to serious land conflicts in the rice belt of India (mainly eastern and southern India) which includes Singur (Hooghly), Nandigram (Midnapore), Bardhaman, Birbhum and the rest of rural West Bengal. Other than West Bengal, SEZs are also proposed in Orissa and Andhra Pradesh, which also grow a lot of rice (see Appendices 1a-1d). In sum, these so-called development projects reduce the area available for rice cultivation and spawn more human rights violations.

According to one estimate, the decrease in per capita availability of arable land in Asia went from 0.43 ha in 1962 to 0.26 ha in 1998.9 However, the neo-liberal policy-makers put the blame mainly on increasing population pressure, thus suppressing the gruesome stories of evictions of rice farmers and destruction of livelihoods.

Across Asia, rice land is under threat. The construction of Special Economic Zones (SEZ) in India will destroy 134,000 hectares of agricultural lands in the first phase. China has seen its area under rice

cultivation drop from over 35 million hectares in the 1970s to 31 million hectares in 1990.

In Indonesia, particularly in Java, 60,000 hectares of rice land are lost every year to industrialisation and urbanisation. In the Philippines, around 10,000 hectares of rice land is lost per year for the same reasons.<sup>10</sup>

### **FOOD CROP TO CASH CROP**

The global policy-makers act as dictators to rice farmers. It is up to them to decide what rice farmers will grow, even if it goes against the will of the farmers or against local demands and culture.<sup>11</sup>

The liberalisation of the rice industry through the World Trade Organisation (WTO) agreements and the ASEAN Free Trade Area (AFTA) has resulted in the opening of rice markets leading to disempowerment of rice farmers.

Rice has given way to cash crops as per global market demands. For example, in Taiwan, WTO agreements resulted in a shift towards production of 'guaranteed price crops' thereby reducing the acreage of rice plantations from 364,000 acres in 1997 to 272,000 acres in 2003.<sup>12</sup>

In Thailand, Bangladesh and India, rice cultivation has given way to shrimp monoculture to a great extent.13 In certain areas in India, rice farmers have been forced to grow genetically modified (GM) cotton in place of rice.14 The irony is that even for the so-called 'guaranteed price crops', there is no guarantee of profit for the farmers and in several cases, rice farmers have suffered tremendous loss due to crop failures or sudden crashes in global market prices. Hundreds of rice-turnedcotton farmers in South India, who were highly indebted to agri-business companies, committed suicide after bad harvests of cotton, leaving behind families to suffer from starvation. 15

## DEGRADATION OF RICE LANDS

Proponents of neo-liberal ideology claim that traditional farming methods do not produce enough food to feed the growing population, and thus should be discarded and replaced by modern techniques. This myth has been deconstructed. Despite the growth in total rice production, a report by Action-Aid found that 854 million people go hungry in the world, with Asia and the Pacific accounting for 64% of hungry population. <sup>16</sup> This figure has risen to 1 billion as of 2009 (FAO 2009).

In 2001 in India, hundreds of poor farmers died of starvation while 60 million tons of food grains rotted in government storage facilities.<sup>17</sup> The factors that determine the livelihood security of rice farmers in Asia are income opportunities and access to food and food producing resources such as land.

Indigenous rice farming techniques and practices are discouraged in neo-liberal negotiations related to trade and intellectual property rights (IPRs). High Yielding Varieties (HYV) and hybrid rice have dominated the scene in Asia.

In Thailand and Burma, almost 40% of the total rice area is planted with only five varieties. In Pakistan, the top five varieties occupy 80% of the total area. In Cambodia, only IR66 accounts for 84% of the country's dry season crop.<sup>18</sup>

These new seeds, however, require high amounts of pesticides and fertilisers which have ruined the traditional rice land ecology of the continent. Agriculture has further intensified pollution and salinisation problems. In 1999, Thailand had to ban shrimp monoculture in its central rice belt as the shrimp farming activities were degrading rice lands to an extent beyond control.<sup>19</sup>

As a cumulative result, the rate of rice land degradation has gone up in Asia, making rice farming unprofitable

and costly. Many rice farmers have been compelled to leave farming and to sell their small fields to rich farmers or, in most cases, to big companies.

### NEO-LIBERAL POLICIES VERSUS GENUINE AGRARIAN REFORM

Neo-liberal policies dictate that land should be utilised in the most profitable way possible leading only big companies to make profits.

Neo-liberal policies have shaped the agricultural and industrial policies of nation states so as to minimise state intervention in production and marketing processes. Neo-liberal processes have also dismantled genuine agrarian reform policies and land reform measures of the state in most Asian countries.

Land ceilings have been abolished, subsidies in agriculture withdrawn and privatisation of community resources intensified. Where land ceilings have been abolished and common property resources privatised, small and marginal rice farmers have lost their land due to economic and political pressures almost immediately.

Privatisation has increased the cost of services like irrigation and electricity which poor rice farmers cannot afford. In many cases, marginal farmers have failed to retain their land due to the high costs of production.

## WORLD FOOD CRISIS WORSENS SITUATION OF POOR RICE FARMERS

A manifestation of neo-liberal market policies, the world faced an unprecedented food crisis in 2008 due to the uncontrolled and rapid rise in world prices for all basic food crops, including rice. The rise in prices led to protests and unrest in many countries, including Egypt, the Ivory Coast, Ethiopia, Philippines and Indonesia. Table 1 shows global

food price increases for several key commodities.

Table 1. Global food price increases

GLOBAL FOOD PRICE RISES
• Wheat: 130%
• Soya: 87%
• Rice: 74%
• Corn: 31%
Time: Year to March 2008

Source: Bloomberg

The present food price crisis has endangered the food security of approximately three billion people.<sup>20</sup> It has jeopardized the food security targets of the MDG and WFS. The United Nations' World Food Programme stated that the price it paid for rice (for food donations) jumped from USD \$460/tonne in March 2008 to USD \$780/tonne in April 2008, just after it made an emergency appeal for an extra USD \$500 million.<sup>21</sup>

# PANIC SPREAD AMONG RICE GROWING COUNTRIES

The rising price of rice created panic among many Asian nations. Big importers of rice like India, Philippines,

Thailand and Vietnam temporarily stopped or drastically reduced rice imports to develop strategic food reserves. In Thailand, rice prices rose by more than 50% in April 2008.<sup>22</sup> Countries like Philippines, Japan and China, which were once selfsufficient in rice production, are now importing rice. China is outsourcing its rice production to poor African countries through its various agribusiness companies. Bangladesh, which is one of Asia's most overpopulated and poorest countries, is particularly vulnerable to rises in the price of its staple, rice.<sup>23</sup> The effects of the 2008 food crisis are shown in Table 2.

### KEY FACTORS LEADING TO THE RISING PRICE OF RICE

One key factor behind the rising price of rice is the continuous conversion of rice fields to other uses, including cash crops and industrial usage. Rice farmers are often forced to migrate to the cities in large numbers when their access to farm land is further diminished due to invasions by agribusiness, SEZs and other projects. Compensation and rehabilitation measures are not adequate.

Table 2. Feeding the world: impacts of the global food crisis (2008)

- 33% rise since January in price paid by Philippines for rice from Vietnam
- 3 billion people worldwide who rely on rice as a staple food
- 40% rise in rice price in Thailand this year
- 19.2% rise in consumer prices in Vietnam last month, against March 2007
- 8.4% rise in food prices in the Philippines last month, compared with March 2007
- 854 million people worldwide who are "food insecure"
- 1 billion people globally who survive on less than \$1 a day, defined as "absolute poverty". The number of hungry people without enough to eat increased by 150 million in 2008 and the present food price crisis will likely to result in a further 200 million falling into absolute poverty
- World supplies of rice are reaching dangerously low levels after stores of South Asia's staple food fell to a 25-year low and governments battled to stabilise domestic markets
- 40% increase in world rice consumption in the past 30 years from 62 kg (136 lbs) per person to 86 kg (190 lbs)

Source: Times Online. http://www.timesonline.co.uk/tol/news/world/asia/article3828373.ec

Approximately 7 million acres of rice land in China and 700,000 acres in Vietnam have already been lost to so-called development projects. which in reality are investment projects for multinational corporations (MNCs) and TNCs.24 A new threat to rice is the indiscriminate and large scale expansion of agro-fuel production in Asian countries. These expansions are often supported by national governments and funded by MNCs and/or IFIs. The alienation between farmers and their rice land has further intensified in the context of the world food crisis as rich food deficit countries such as the Gulf States and South Korea have negotiated for the purchase of extensive farmland in developing countries in order to secure food supplies. This trend of "neo-colonialism" is intensifying alarmingly.

Rice farmers have been forced to abandon production in the face of growing uneven and unfair competition with big companies in the open market, leading to sharp decreases in total rice production. Following neo-liberal principles, many governments in Asia have withdrawn subsidies from agriculture. In this context, any rise in input costs impacts rice production to a great extent; and smallholders in particular have suffered.

Growing consolidation of land holdings is another key factor which is forcing subsistence farmers out of rice lands. The root cause behind this is the penetration of multinational agricultural corporations into local rice business enterprises. These companies are promoting corporate farming and in many cases, introducing contract farming by pursuing vertically integrated contract production. In other cases, the companies are taking direct control over land and producing hybrid rice, often in collaboration with the governments' so-called 'development projects'.

Climate change also has a role to play in destroying rice crops in Asia. Frequent cyclones and changes in rain cycles have affected rice cultivation to a great extent. A 2007 cyclone in Bangladesh destroyed approximately USD \$600 million worth of rice crops, leading to price increases of about 70 percent.<sup>25</sup>

One could argue that increases in the price of rice would be beneficial to rice farmers; however the reality is just the opposite. In the absence of government support, the majority of rice farmers, who are poor and marginalized, have failed to bear the rising input costs and have been trapped by MNCs in an eternal cycle of debt. In India, hundreds of thousands of small and medium scale farmers have committed suicide due to this debt burden.

## THE RESPONSE OF GLOBAL ACTORS

The present world food price crisis is a result of deeply-rooted neo-liberal principles and policies that have been imposed on poor and developing countries by IFIs. The irony is that in the name of addressing the crisis, global policy-makers and their national allies are promoting the same old formula which in fact created the problem. The International Monetary Fund (IMF) says it is responding to the global food crisis by doling out new emergency loans to 15 of the world's poorest nations, mostly in Africa. However, the new loans carry the same controversial conditions. such as tariff and subsidies cuts, that are mainly to blame for the food crisis. The World Bank has promoted large scale industrial farming, more fertilisers and "high-yielding" seeds to farmers in addition to food aid and export promotion. Alongside these ill-suited responses, the present crisis is being used to justify the WTO Agreement on Agriculture (AoA). This is a matter of highest concern for poor rice growing farmers.

Countries are also being encouraged to sign an alarming number of deals with foreign investors that give these investors control over their countries' most important agricultural lands.26 Furthermore, in the name of addressing the food crisis. IFIs and international institutions like IRRI are promoting hybrid varieties of rice. In May 2008, the Philippines Department of Agriculture signed an agreement with IRRI to conduct a USD \$216 million project to promote hybrid rice production by providing subsidies. Indonesia says it will spend USD \$651 million this year to provide farmers with rice seeds, including high-yielding hybrid varieties, to boost production. The sad reality is that promotion of hybrid varieties will further reduce sustainable production of rice in the long run and will expose poor rice farmers to extremely vulnerable situations.

The UN has also responded to the food price crisis. The UN Human Rights Council expressed its concern about the crisis in May 2008 and urged nations and global actors to recognize the 'Right to Food' and to ensure that food security is a top priority. The UN has further developed a high level Task Force to combat the food price crisis and come up with a Comprehensive Framework for Action (CFA) in order to resolve the ongoing crisis. The CFA urges all stakeholders, including NGOs, to play a proactive role in upholding food security. However, the CFA also calls for immediate action like food aid through global actors as well as emphasizing long-term food and nutrition security. To this end, the CFA has suggested developing coordination and monitoring mechanisms at both the macro and micro levels.

To meet the immediate needs of vulnerable populations, the CFA proposes four key strategies:

 Emergency food assistance, nutrition, interventions and safety nets to be enhanced and made more accessible.

- 2) Smallholder farmer food production to be boosted.
- 3) Trade and tax policies to be adjusted.
- 4) Macroeconomic implications to be managed.

Over the long term, the CFA suggests the following:

- 1) Social protection systems should be expanded.
- Smallholder farmer-led food availability growth should be sustained.
- 3) International food markets should be improved.
- 4) An international biofuel consensus should be developed.

The CFA has focused on vulnerable groups and the high level Task Force members as well as global NGOs in order to combat the great food crisis of 2008.

The time has come for social organizations and movements in Asia and elsewhere to carefully assess the proposals of the CFA and create pressure on global actors to ensure that a conducive climate is created for genuine reform measures. This will eliminate structural discriminations and neo-liberal exploitations and will effectively address the issue of poverty and hunger over the short and long term.

### THE BATTLE AHEAD

A sustainable and secure food system demands food sovereignty of the poor and calls for an end to the unequal economic and political power relationships from the micro to the macro level. The need of the hour is to empower poor rice farmers so that they can assert their rights. In order to avoid a repeat of the current food crisis, the following are essential:

- Recognition that the present food crisis is a product of neo-liberal policies and has little to do with shortages in rice production
- An immediate stop to the conversion of rice land to other uses

- No hybrid rice
- The protection of traditional rice cultivation as a priority
- Government rejection of neo-liberal policies and support for subsistence rice farmers
- Rejection of the WTO in agriculture and the inclusion of IFIs, MNCs and TNCs in resolving the food price crisis
- The rights of small peasants should be upheld and food sovereignty promoted

## ACCESS TO LAND IS A HUMAN RIGHT

In order to address the current food crisis and protect rice production and long-term food sovereignty in Asia, it is essential to recognize land as a human right. The right to food is a human right under the International Covenant on Economic. Social and Cultural Rights. The most relevant state obligation under the right to food is the implementation of genuine agrarian reform. In other words, the state must ensure that farmers have access to land and other necessary resources for production. and protection from invasion.27

The state must create a climate that is conducive to land retention, one that enables farmers to access productive resources as well as to earn an adequate income from agriculture to fulfil their basic household needs. It is a human rights obligation of the state to make agriculture profitable for poor rice farmers and to ensure that they have access to rice lands.

The state, however, is often unwilling to fulfil its obligations under the right to food. Different multi-lateral institutions are contributing to the process of weakening people's food sovereignty; the World Bank's controversial market-oriented land reform programme is one such example. This programme has undermined the basic 'rights' aspect of agrarian reform and has left the land-related questions to

be settled in the open market, which is neither free nor fair and already distorted due to different economic and political factors. Access to land is the most crucial factor for rice farmers and it can only be guaranteed through a proper implementation of genuine agrarian underlying measures, which would address structural inequities. Neo-liberal policies are recipes for hunger and are not the solution to the problems facing Asia's rice farmers.

#### **RICE FARMERS REVOLT**

For the rice farmers in Asia, land is life and access and control of land is a right. As with life, land cannot be compromised. In the same way, just as the loss of life cannot be adequately compensated, so too with the loss of land.

With the land alienation process intensifying in different forms, rice farmers across the continent have revolted against the neo-liberal paradigm. Peasants' movements have gained strength in South Asia, Philippines, Thailand and Indonesia. Rice farmers have taken part in regional and international solidarity movements to highlight the issue of land alienation and violation of human rights.

The movements have faced brutal repressions from the state. Activists have suffered imprisonment, women activists have suffered molestations and several rice farmers have become martyrs for the cause. The sufferings continue, as do the movements at various levels. The need of the hour is to bring everybody in Asia, from rice farmers to consumers, to a common platform to voice protests against the systematic destruction of rice lands and rice culture and to develop strategies for revitalising rice culture in the continent.

#### **SHALL WE KEEP SILENT?**

Shall we keep silent as rice lands rapidly disappear across Asia?

When rice lands are degraded by new farming techniques and genetic monopolies? Shall we keep silent when the producers of rice do not have access to land or food and when human rights violations of rice farmers are rampant? Shall we keep silent when hundreds of rice farmers in Asia have sacrificed their lives to feed us?

We shall not keep silent.

## THE DEMANDS OF RICE FARMERS IN ASIA

- Immediate implementation of genuine agrarian reform.
- Access to and control of land and other productive resources.
- Recognising the rights of women to own land. Land to men and women tillers alike.
- Rejection of neo-liberal policies which intensify land alienation and land degradation.
- Land is livelihood and loss of land is loss of life; no compensation is enough for land.

### REVIVAL OF RICE CULTURE: A STEP TOWARDS FOOD SOVEREIGNTY

Rice farmers continue their struggle for food sovereignty through revitalising rice culture across the continent.

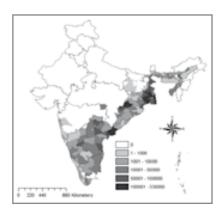
Revival of rice culture means embracing 'localisation' and rejecting neo-liberal globalisation processes. It will lead us to community-based food production determined by local needs and based on indigenous wisdom and techniques.<sup>28</sup>

It will allow rice farmers to develop, nurture and preserve varieties of seeds suitable for different topographies in Asia. It will further allow the rice farmers to determine their own development priorities and will promote genuine agrarian reform.<sup>29</sup>

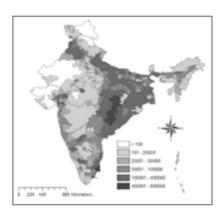
Revival of rice culture will resolve the inherent structural inequity in the rural power set-up and adequately address caste and gender-based discriminations. Revival of rice culture will ensure access to land for all rice farmers and progressively realise the dream of achieving people's food sovereignty from household to nation state levels. Rice festivals and rituals make us proud of our age-old rice culture and promote strong bonds between rice farmers and consumers across the continent.

Your participation and support in the revival of rice culture will make a difference.

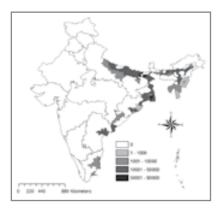
#### **APPENDICES**



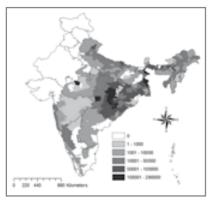
Appendix 1a: District level map of double rice cropping area in 1999-2000 (ha/district)



Appendix 1b: District level map of single rice cropping in 1999-2000 (ha/district)



Appendix 1c: District level map of deepwater rice area in 1999-2000 (ha/district)



Appendix 1d: District level map of upland rice area in 1999-2000 (ha/district)

Source:

http://eos-webster.sr.unh.edu/data\_guides/india\_ crops\_dg.jsp#imageSpot (Downloaded on 18th Sept 2009)

### **ENDNOTES**

- <sup>1</sup> IRRI table: http://www.irri.org/science/ricestat/
- No 31 Numbers of farms by size & distribution, selected Asian countries, selected years. No. 1 Rough Rice production (000 t) by country & geographical region (1961-2004)
- <sup>2</sup> Biopiracy, Trips and the Patenting of Asia's Rice Bowl: A collective NGO situationer on IPRs on Rice May 1998 This paper is a common initiative of the following NGOs, POs and individuals from Indonesia, Philippines and Thailand: Assisi Foundation, BIOTHAI, CEC,

GRAIN, Greens Philippines, Hayuma, MAPISAN, MASIPAG, PAN Indonesia, PDG, SIBAT, TREE and Univ. of the Philippines colleagues Dr. Romy Quijano & Dr. Oscar Zamora.

- <sup>3</sup> IRRI table: http://www.irri.org/science/ ricestat/ No. 1 Rough Rice production (000 t) by country & geographical region (1961-2004)
- <sup>4</sup> IRRI table No. 32 Number & Area of farm holdings, selected Asian countries, selected years
- <sup>5</sup> IRRI table No. 33 total agricultural population and total agricultural labour force (in millions) by country & geographical region (1961-2000)
- <sup>6</sup> Gurdev Singh Khush: Masterminding a new rice revolution; Interview by Ethirajan Anbaras http://www.unesco.org/courier/1999\_06/uk/dires/txt1.htm
- <sup>7</sup> IRRI table No 31Numbers of farms by size & distribution, selected Asian countries, selected years
- <sup>8</sup> Asian farmers Fight for Survival and Control of the Rice Industry AFA and ASIADHRRA ISSUE PAPER Volume 1 No. 1, December 2004
- <sup>9</sup> FAO 2003, Agriculture Food & Water
- Gurdev Singh Khush: Masterminding a new rice revolution; Interview by Ethirajan Anbaras http://www.unesco.org/courier/1999\_06/uk/dires/txt1.htm
- 11 Rice comes unstuck as Asia steams ahead SINGAPORE, Jan 24 (Reuters Life!) http://asia.news.yahoo.com/070124/3/2wa29.html
- 12 Asian Farmer's Fight for Survival and Control of the Rice Industry. September 22, 2006 by Mirisa Hasfaria.: http://mirisa.wordpress.com/2006/09/22/asian-farmers-fight-for-survival-and-control-of-therice-industry/People's Agenda for Rejuvenation of Indian Agriculture "WTO, The Agrarian Crisis and Farmers Suicides" WTO Kills Farmers Research Foundation for Science, Technology and Ecology 2006

- <sup>13</sup> Bangladesh Picks Shrimps over Rice, but Landless May Get Neither (Source: OneWorld South Asia, 18 December 2003, http://www.oneworld.net/article/ view/75512/1
- <sup>14</sup> World in a Grain of Rice, says Vandana Shiva, is more than foodstuff, it is an entire culture. And it's under threat. Vandana Shiva, The Ecologist Dec00/Jan01
- 15 Return to Organic Cotton & Avoid the Bt-Cotton Trap, http://www.i-sis.org.uk/ ROC.php
- <sup>16</sup> Food –The Facts. http://www.actionaid. org/main.aspx?PageID=845
- 17 India follows Argentina: More food export, more hunger. http://infochangeindia.org/index2.php?option=com\_content &do pdf=1&id=183
- <sup>18</sup> War And Peace On Our Farms and tables by Vandana Shiva, Edited version of the speech delivered at the Women's Conference on Environment in Asia and the Pacific,3 September 2000, Kitakyushu, Japan
- <sup>19</sup> Rice versus shrimp production in Thailand: Is there really a conflict? Journal of Agricultural and Applied Economics, April 2003 by Mekhora, Thamrong, McCann, Laura M J http://www.wrm.org. uy/deforestation/mangroves/book8.html
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Pesticide Action Network Asia and the Pacific (PAN AP) is one of five regional centres of PAN, a global network which aims to eliminate the harm caused by pesticides and promote biodiversity-based ecological agriculture. It is committed to the empowerment of people especially women, agricultural workers, peasants and indigenous farmers. PAN AP launched its Save Our Rice Campaign in 2003 in response to the powerful threats arising against rice, the staple food of half the world's population. The foundation of the Campaign is the "Five Pillars of Rice Wisdom": (1) Rice Culture, (2) Community

Wisdom, (3) Biodiversity-based Ecological Agriculture, (4) Safe Food and (5) Food Sovereignty. The Campaign is dedicated to saving traditional local rice, small rice farmers, rice lands and the rice heritage of Asia. PAN AP Rice Sheets provide relevant information on the threats to rice and are written from the people's perspective. Enquiries may be sent to: panap@panap.net.

The first version of this paper was called "Rice Lands: Fields of Agony and Fields of Hope", written by the same author and released as a Week of Rice Action 2007 Rice Grains publication.

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