

Respecting innovations

Despite the resistance to change, humanity needs innovation to achieve social improvement and economic progress. The Intellectual Property Rights have made us think how much human innovation and creativity is under threat.

Intellectual Property Rights are important because of their impact on all fields of humanity. IPR provides the property rights needed for research and development in the fields of science, technology, agriculture, pharmaceuticals, health care etc. The World Intellectual Property Organisation has designated 2008 as the year for 'celebrating innovation and promoting respect for IP.'

Intellectual Property Rights mainly include patents, trademarks, design rights etc which pertains to industrial property inventions and copyrights that cover printed materials, works of art etc. India is one of the founding signatories of the WTO Agreement for the protection and promotion of all Intellectual Property Rights. The Agreement recognises Intellectual Property Rights as private rights. These rights can be assigned, gifted, sold and licensed like any other property.

With the advent of knowledge revolution, creating, protecting and managing Intellectual Property have become absolutely essential in the face of changing trade environment, which is characterised by the global competition. The Government is to take necessary legal measures to examine the violations of Intellectual Property Rights.

But within any IPR regime, a range of specific problems arises for any state, which it has to resolve without going against the domain of the Centre. Kerala Government has adopted an intellectual property right policy to deal with such problems. Kerala is the first State in the country to come forward to formulate such a policy.

To oversee and protect Intellectual Property Rights, a supervisory council has been constituted with the Chief Minister as Chairman and Law Minister as Vice Chairman. The council is an autonomous body consisting of ministers, scientists and other experts in this field.

Kerala's traditional knowledge in the field of Ayurveda, Art and Craft Architecture etc are unique. The unexpected onslaught on our traditional knowledge from commercial interests is to be dealt with effectively and efficiently. The Government is committed to implementing the IPR policy to protect the interests of the State's rich traditional knowledge. Kerala's traditional knowledge, especially Ayurveda, yields livelihoods to many and forms the basis for practice for many. But, the absence of legal property rights over such knowledge creates scope for the business majors patenting them, depriving the real owners of these knowledge the right to derive a livelihood from them. The IPR policy suggests a legal arrangement for preventing this. Government is taking all the possible measures to give awareness about the need of the patent system in the complex world of technology and the procedures for filing, grant, renewal, etc. of patent applications.

This issue of *Kerala Calling* makes a profound and comprehensive attempt to help its readers to come to terms with the new ground realities and take positive steps to generate more Intellectual Property Rights, protect and manage them efficiently. It is the beginning and we have to go a long way.

Protecting the Crea

The concept of intellectual property (IP) will be understood better if we understand what is meant by the term property. In the legal sense, property refers to the bundle of rights that the law confers on a person by virtue of the ownership and possession of an object.

Intellectual Property Rights (IPRs) are legal and institutional devices to protect creations of the mind such as inventions, works of art and literature, and designs. They protect products by differentiating them from similar ones sold by competitors through the use of distinguishing marks.

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However, a material object under one's possession may not mean much as property if it does not become a resource to satisfy some human want or need. Man by the use of his intellect, either in the form of ideas or technology, converts a natural resource into something of utility, making it an item of property.

What rights constitute the bundle of rights that are termed as property? These rights deal with various aspects of the relationship between persons and their property, such as: ownership and possession; use and enjoyment of the fruits of its application; exclusion of others from use and application of the property; and transfer of rights in the property.

The property can relate to a tangible thing eg. land or buildings, or to an intangible thing eg. a copyright. This brings us to the concept of intellectual property. It is simply the property created by the application of human mind.

IP has been generally divided into two main branches viz., (a) Industrial Property, and (b) Copyright.





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Industrial property consists of rights relating to inventions, trade marks, industrial designs and geographical indications. Copyright protects rights related to creation of human mind in the fields of literature, scientific, music, art, audio-visual works, etc.

As per the obligations under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) all the members of World Trade Organization are expected to implement national systems of Intellectual Property Rights (IPR) following an agreed set of minimum standards. Agreement of the WTO recognises seven categories of IPRs, which had already been enshrined in various treaties administered by the World Intellectual Property Organisation (WIPO) since the late 19th century.

Patent

A patent is an exclusive right granted by a country to the owner of an invention to make, use, manufacture and market the invention, provided the invention satisfies certain conditions stipulated in the law.

What KSCSTE offers?

KSCSTE established Patent Information Centre – Kerala (PIC-Kerala) in 2003, with the following objectives.

To create awareness on Intellectual Property Rights among the people through educational workshops, seminars, lectures and exhibitions, and thus nurturing

Scientists, Researchers, Professionals, grass root innovators and Students.

To increase the IP output of the State by facilitating and guiding patenting activities within the state.

This right is available to the owner of the invention only for a limited period of time. A patent in the law is a property right and hence it can be inherited, gifted, assigned, licensed or sold. As the right is conferred by the State, it can be revoked by the State under very special circumstances for the benefit of public even if the patent has been sold or licensed or manufactured or marketed in the meantime. The patent right is territorial in nature.

Copyright

Copyright is granted in respect of original literary, musical, artistic or audio-visual works. This include rights of reproduction, communication to the public, adaptation and translation of work. Copyright is now spoken together with the related or neighbouring rights as one category. Though originality in expression is a requirement for copyright, the quality of the work is not an issue at all.

Copyright is an inherent right that

commences since the completion of the work as an expression of the idea. Copyright comes with the doctrine of 'fair use', which includes use of the work for purposes of criticism, comment, news reporting, teaching and education, scholarship and research etc. Fair use does not constitute infringement.

Trade marks and service marks

Trade marks and service marks are distinctive symbols, signs, logos that help the consumer to distinguish between competing goods or services and are a major part of the goodwill a company enjoys in the trade. A trade name is the name of an enterprise, which also individualises the enterprise in the minds of the customers. They are therefore protected as IP. A trade mark is required to be distinctive and not deceptive.

Geographical Indications

A Geographical Indication (GI) is a sign used on goods that have a specific geographical origin and possess qualities or a reputation that are due solely to the place of origin e.g. its specific climate, soil or method of production. Such goods enjoy an advantage over competing goods solely because of their geographical origin, which thus

becomes a kind of IP and is protected. A GI is different from a trade mark. It can be used by all producers who make their products in a place designated by the GI and share qualities. Palakkadan Matta Rice, Njavara Rice, Aranmula Kannadi etc. are registered GIs from Kerala.

GI can also be protected by collective marks belonging to a group of traders or producers or a certification trade mark that does not belong to any one; the understanding for its registration is that anyone who meets the specified conditions can use it.

Industrial Design

An industrial design is the ornamental or aesthetic aspect of an article; it may consist of three dimensional features such as shape or surface, or of two dimensional features such as patterns, lines or colour. The design serves as a tool for product differentiation and lures customers by enhanced visual appeal. Industrial designs are applied to a wide variety of products of industry or handicraft: from watches, jewellery, fashion and other luxury items to industrial and medical implements; from house ware, furniture, electrical appliances to vehicles and architectural structures; from practical goods and textile designs to leisure items such as toys.

Layout Designs

Layout Designs of Integrated



Services available in PIC-Kerala

Financial and technical support for organizing IPR awareness campaigns to Universities, Research Institutions, Industries, Govt or Aided Institutions, etc.

In-house Patent database search, free of cost.

Technical and legal assistance for filing Patents.

Facilitate Patent filing through Technology information Forecasting and Assessment Council (TIFAC).

For more details, visit www.kscste.kerala.gov.in or mail to patentcentre@gmail.com



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Circuits is a relatively new area in IP, which has appeared with computer technology and has acquired importance as the technology makes rapid advances. The right in topography aims to prevent copying of the layout design but reverse engineering to come up with improved design is regarded as fair. It may also be noted that while for claiming a patent an invention is required to meet the criteria both of novelty and inventive step, a layout design is only required to be original. Protection of layout design confers no monopoly right; independent

of inventors, authors and other creative persons, including first adapters and is a powerful factor of production and wealth generation in a modern economy. The IP is a significant factor in gaining competitive advantage over rivals in the trade and industry as the entire idea of IP is to protect the owner against its unlawful use by any person or party offering same or similar products or services.

IP is concerned with the human capacity to produce something new and offer it for public use. The property does not lie in the thing so

development of a design, identical with a protected design is permitted.

Trade Secret

Trade Secret is another form of protection for commercially valuable information such as production methods or business plans. They are protected from disclosure (may be by dishonest means) but once they are disclosed or known otherwise through legitimate means, they enter the public domain.

The intellectual property thus vests in a creation of human mind involving knowledge, labour and skill. It is the result of sustained intellectual application and efforts

produced and offered but in the owner's rights over the creation of his/her intellect. This intellectual property is intangible, and though in each case it is associated with a tangible object, it is independent of the object itself.

Need for protection of Intellectual Properties

Any property has to be protected in order to save it from an unauthorized use. Similarly, the Intellectual Property Rights also need to be protected from infringement.

- IPRs relates to new ideas, new technology, new products and evolution of knowledge. In today's dynamic and knowledge-based industrial environment, IPRs are key elements for gaining competitive edge of the industry and ascertaining the desired success to the business enterprise by creating and preserving exclusive markets.
- The cost of R&D to develop new products and new processes is rising sharply and hence, there is a need to increase and accelerate the extent of protection of IPRs to get reasonable return on investment and reduce the element of risk and uncertainty.
- IPR protection provides an incentive to inventors for further research and investment in R&D, which leads to creation of new and better products and, in turn, brings about economic growth and social benefits.
- IPRs are emerging as a new wealth and power of nations. IPRs through propagation of new knowledge and ideas, leads to creation of new and better products and brings about industrial, economic and social development of the country. IPRs have become significant components of world-trade and are often hailed as the new global currency.■

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Study of the history of institutions and systems reveals that the survival of social, economic, political and legal systems depends on the public good they serve. As the Bible says, “Every tree that does not bear good fruit will be cut down and thrown into the fire.” [Matt. 7:19.] The fruits in case of institutions and systems are the benefits that they bring to humanity. Intellectual Property Rights (IPRs) are no exception.

IPRs are creations of law. The IPR system evolved as a solution to the problem of rewarding creativity and inventiveness. These are the sources of knowledge and wisdom. Knowledge in most traditions had been held as sacred and not subject to mundane laws, for long. Appropriation of the gains of knowledge to purely one’s own personal well being was considered as against the grain of wisdom, since knowledge is that which liberates - Sa vidya ya vimuktaye.

This has been the guiding principle of India. In the West too, knowledge was for public good and also ‘public goods’ since “non-rivalry and costly exclusion generally apply to their use”. [Pinoda]. The enclosing of the public space of knowledge into private property is a modern phenomenon.

It is after the Middle Ages, with the Renaissance, when there was a

Action Against Appropriation

great explosion of knowledge that intellectual property rights as private property really emerged though some evidences suggest that certain rights similar to patent were in existence in ancient Greek city states. The Venetian Patent statute of 1474 is considered the mother of all patent protection notwithstanding the awarding of a patent in the Republic of Florence in 1421. The statute of Monopolies of 1623 of England buttressed this trend. The Constitution of the United States of America included a provision of

protection of IPRs in it Article I, Section 8, Clause 8 of that constitution reads, *the Congress shall have power to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.*

The regime of IPRs started with the grand objective of protecting the interests of the producers of knowledge. The underlying philosophy, as stated in the legend on the cupola of the Headquarters building of the World Intellectual

and available to the people in an affordable way. The system has to ensure this. The period limitation for a patent is one way of ensuring access. Further, exclusivity for the limited period also needs to be tempered with public interest concerns. Enjoyment of exclusive rights with total disregard of common weal will boomerang. Compulsory licence provisions in most patent legislations are to be viewed from this angle.

While patents protect new ideas, copyrights protect their expressions. That could be in the form of literary, dramatic, musical and artistic works or cinematograph films. People get access to knowledge through expressions. While uninhibited right to express any idea is available, once an idea is expressed in a particular way or format, another cannot copy it. This is the essence of copyright protection. Here too, the rights ensure further creativity. If the expressions are freely copied, people will be reluctant to make them public as, then they will not be able to reap any economic return from their effort. Further, they also get disheartened if their authorship does not get recognised. The copyright system through the economic and moral rights, guarantees both. The system contributes to public interest through incentivising more creativity, which will become common heritage of humanity after a specific period. However, as in the case of patents, here too certain extra access needs to be provided to ensure better creative outputs. Generally the copyright laws provide for this in what is known as fair use provisions, which permit uses in certain circumstances without any specific permission from the copyright owner.

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The tension between private right and public good always characterised Intellectual Property policy. Resolving this tension between private interest and public good is the major challenge of IP policy. Different models have evolved over time on solving this issue.

The Gowers Review of Intellectual Property, a United Kingdom (UK) task force, which studied the IP laws of UK, mentions four models of tackling this issue. The US model considers knowledge as a form of property and, therefore, belonging to the individual, and consequently, public rights are exceptions. In the second model, knowledge is an asset first and a public resource second. In this model, the rights of producers get precedence over those of the consumers or the public.

According to Gower, this is the model followed by the UK. The third model is diametrically opposite to the U.S. model. In this, knowledge is first a public resource and only secondly a private asset. In this model, public interest is the basis of IP policy. Here public interest provisions are “rights” and not exceptions, the exclusive rights rather being the exceptions. Gowers’ fourth model is ‘cyber-socialism’. In this model knowledge is only a public resource and not to be restricted.

Examples are the case of Linux operating system and Wikipedia. However, the Report finds this model unworkable.

The Indian model is closer to the United Kingdom model. Generally it is a balanced regime where the need for incentives for creativity and innovation is matched with the need of the society to enjoy the fruits of the same. ■

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A Big **No** To Forging

With India entering the TRIPS regime under the WTO, and amending the Indian Patents Act 1970 to make its TRIPS - compatible, a number of new issues have emerged in the context of Kerala which need to be addressed forthwith. It prompted



the Government of Kerala to publish, for the first time in India, a comprehensive IPR Policy to encourage a healthy atmosphere conducive to research and development within the framework of National and International legislations of IPR. The IPR policy envisages an enabling environment that recognises and values, creativity and innovation while preventing the private appropriation of the Traditional Knowledge.

The IPR policy is neither a legal document, nor a position paper giving an exhaustive statement of the position of the Government of Kerala on basic IPR issue. It simply gives the Government's approach on certain selected issues of practical

importance for Kerala in the context of the new IPR regime. Legislation will have to come out of it, but only after a careful consideration of the State Government's Constitutional powers in the matter.

There are four basic practical issues that the IPR policy addresses. The first, which is by far the most important, relates to the protection of those who use traditional knowledge to earn their livelihoods. It is obvious that such knowledge and practices have to be kept out of the domain of private patents. At the same time they cannot simply be put in the public domain, since, this, while preventing direct private patenting of existing knowledge and practices, would not prevent their indirect private appropriation, through what will be claimed as "improvements" but constitute mere repackaging or minor modifications. Our Government's approach therefore is to put all such knowledge and practices in the domain of "knowledge commons" which

have two main characteristics: first while such knowledge is available for non-commercial use by anybody, its commercial use can be made only through negotiations with the existing right holder; and secondly, any improvement made on the basis of this knowledge will have to be put back into the “commons”. Through this approach we can defend the livelihoods of the practitioners of traditional knowledge, while preventing the private appropriation of such knowledge and yet adhering to the new IPR regime.

The second area relates to bio-diversity where there is already Central legislation. For enforcing the “knowledge commons” rule on the MNCs and the domestic corporate sector, a mechanism needs to be put in place. In the realm of traditional medicine, which is based largely on the use of the biological resources of the State, such a mechanism can be provided through state -level legislation that supplements the Central Biodiversity Act. Such legislation will make it mandatory for MNCs and domestic corporates to accept the “commons” ideas as a condition for research relating to, or the commercial use of, the biological resources of the state. This will require the additional clearance of their applications by the State Biodiversity Board apart from the existing mechanism under the Biodiversity Act.

The third area concerns the property rights over research in state government funded and state government aided institutions, which has become important because of “outsourcing” of research from abroad. Here the approach is to distinguish between the different sources of funding of such research. While all research funded by the institution itself and the state government should be state government property, the research funded by foreign governments or by private sources, should belong to “commons” unless an exception made by the Supreme Council on Intellectual Property (SCIP) proposed to be set up under the policy. Property rights over research funded by the Central government or its institutions will have to be decided on a case by case basis, since the latter have their own rules on this which have to be respected.

The fourth area is the promotion of innovative effort in the state. For this various incentives and promotional measures have been outlined in the policy.

The operationalisation of this policy will throw up major challenges, arising inter alia from the Constitutional limits upon state government powers. But before we even explore the legal possibilities, we have to be clear about our approach. Such clarity will also help us build a national consensus on these important issues. This policy document therefore is only the first step in a rather protracted journey. ■



With India entering the TRIPS regime under the WTO, and amending the Indian patents Act 1970 to make it TRIPS-compatible, a number of new issues have emerged in the context of Kerala which need to be addressed forthwith.

A major issue for Kerala relates to the protection of traditional knowledge, especially Ayurveda. But while it yields livelihoods to many, or forms the basis for practice for many, no legal property rights over such knowledge

Policy for Conserving Rights

Salient Features

exists, which creates scope for its private misappropriation. To prevent this the basic elements of the legal arrangement for the protection of traditional knowledge must be the following:

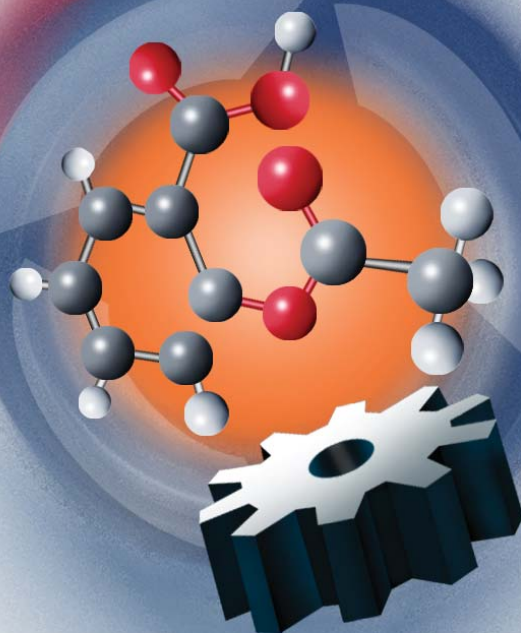
all traditional knowledge, including traditional medicine, the practice of which sustains livelihoods, must belong to the domain of “knowledge commons” and not to the “public domain”;

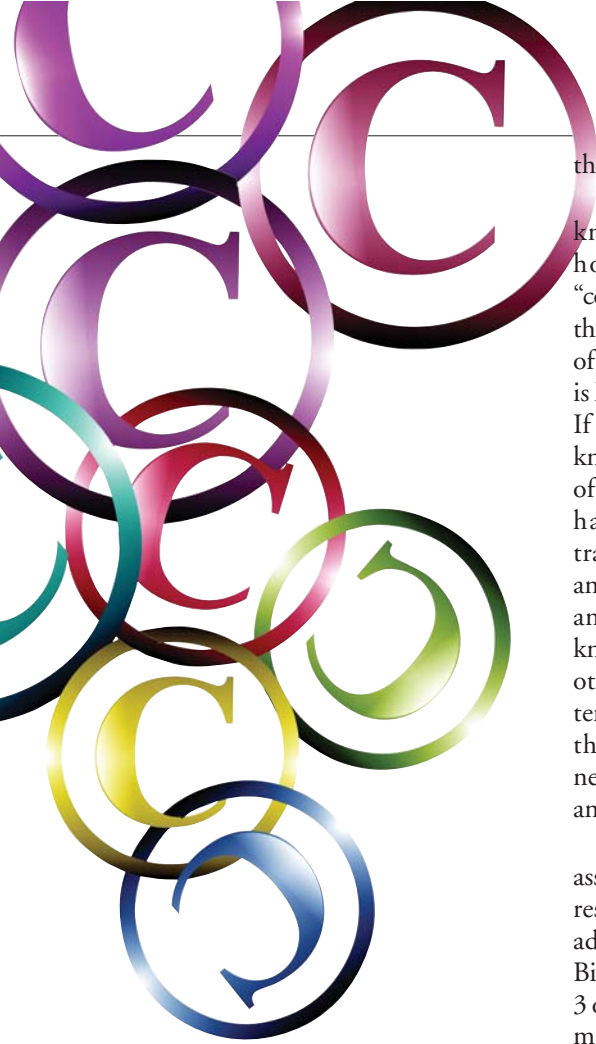
in the case of knowledge of the first category which has a community or family custodian., this custodian will be deemed to have rights over the knowledge, while in the case of the second category, the Kerala State will be deemed to have rights over the knowledge;

no entity that is registered as a medium or large enterprise may be deemed to have any rights over traditional knowledge;

the right-holders will have two kinds of rights: first, the right, where applicable, to a “brand name” or a name associated with the unique practice of an institution or community or family, such as “Kotakkal massage”; and secondly, the right to the use of the knowledge;

everybody else, other than the right-holder to the





their practices and products.

All right-holders of traditional knowledge will be deemed to be holding their rights under a “commons license”. Under this license the right-holder permits others the use of the knowledge over which the right is held for non-commercial purposes. If any development is made using this knowledge, then under the conditions of this license this development will have to be put back into the traditional knowledge “commons” and cannot be patented anywhere. If any commercial use of traditional knowledge is to be made by any entity other than the right-holder, then the terms and conditions under which this can be done will have to be negotiated between the right-holder and the other potential user.

In the case traditional knowledge associated with the use of biological resources, there is a way of providing additional safeguards by using the Biological Diversity Act 2002. Section 3 of the Act provides that all foreigners must get previous approval of the National Biodiversity Authority (NBA) to “obtain any biological resource occurring in India or knowledge associated thereto, for research or for commercial utilisation or for bio-survey bio-utilisation”.

When it comes to the commercial utilisation of biological resources, foreigners are required to obtain the permission only of the NBA and not of the SBB, i.e., unlike Indian non-traditional users they are kept outside the purview of Section 7 of the Biological Diversity Act.

To recapitulate, our additional safeguard visualises adding to the provisions of the Biological Diversity Act 2002 in three ways: first, making it obligatory for foreigners’ applications for obtaining knowledge relating to biological resources of the State to be referred to the SBB, besides the NBA; second, making it obligatory for Indians, other than traditional users, to get the approval of the SBB for obtaining knowledge relating to biological resources of the state; and third, making it obligatory

for foreigners to get the approval of the SBB for obtaining knowledge relating to the biological resources of the State.

The additional safeguard can exist only for traditional knowledge associated with biological resources. For the protection of other traditional knowledge the KTKA mechanism suggested earlier is all that can be provided.

To oversee the activities of the KTKA and the SBB with regard to the protection of traditional knowledge, to provide overall supervision in matters relating to intellectual property rights, and to follow up the recommendations of the KTKA with regard to prosecutions for the violation of knowledge-users’ rights, a specialised governmental body called the Supervisory Council on Intellectual Property will be set up under the chairmanship of the Chief Minister and with the Law Minister as its Vice Chairman. It will pursue all cases of breach of agreement on knowledge-users’ right. It will be the conduit through which all patent applications from State Government-funded or state government-aided research institutions will pass. It will help any potential patent applicant who asks for its assistance to prepare proper patent applications. It will assist all those who are on the verge of patentable inventions but are held up in their research work and cannot complete it for some reasons (including financial constraints). It will encourage in various ways patentable research in the state. It will disseminate knowledge in the state about intellectual property rights. And it will in general uphold and promote the interest of the state and its people in whatever way it deems fit in the new International Property Rights regime. This Supervisory Council will operate through a number of sub-committees and specialized groups, which will meet frequently and deal with specific issues.

traditional knowledge, who wishes to use this knowledge will have to do so under a “common license;”

any use of traditional knowledge or practice in violation of the “commons license” within or outside the State of Kerala will be considered a violation of the rights of the right-holders and will invite prosecution.

In addition to creating and maintaining such a register of traditional practitioners, the KTKA will also be in charge of enforcing the rights created under the legal arrangement mentioned earlier, recommending legal action against the violators of these rights and of the “commons license”, helping the right-holders, both the State and the private communities/individuals to negotiate terms with other possible commercial users of traditional knowledge and undertaking promotional activities like forming Traditional Knowledge Users’ cooperatives, in order to enable such users to access larger markets for

Contd. on page 37

Another major issue that will arise in the new context relates to intellectual property rights over the outcome of research in state government-funded and state government-aided institutions. As regards private institutions or Central government-funded institutions, they will be subject to guidelines which would be common all over the country and over which the state government has no jurisdiction.

In the first set of projects, it should be a condition that the patents taken out on the research output should be in the domain of “creative commons”, so that anyone can use these for whatever purpose, and all useful modifications derived from or based on these will be put back into “creative commons” available for anyone to use. This would ensure that MNCs and private corporates do not use state-funded institutions as a source of cheap labour for buttressing their monopoly position. In the second set of projects, the research output must clearly be the property of the state government, but a suitable system, of rewards will be introduced, by the Supervisory Council on Intellectual Property, for the research scientists upon whose work the output is based. The state government may decide to put the research output in many cases in the domain of “creative commons” but that will be its own decision, to dispose of its “intellectual property”

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in any manner it deems fit. In the third set of cases, the intellectual property rights over the outcome of research should be left open and decided on a “case-by-case” basis, since the research partners in these cases may well have their own rules regarding the intellectual property status of outcomes of joint research.

Since the patent applications on all such projects will have to go through the SCIP, it will at that stage decide whether a patent sought in the case of a project of the second category, i.e. on a state government-funded project, should be put into “knowledge commons”. This decision however has to be taken in consultation with the research institution concerned and by the full meeting of the SCIP. ■

Plant Varieties Recognising Farmers

Since the dawn of settled agriculture, generations of farmers world over, and particularly in the centers of crop plant diversity have been continuously selecting domesticated plants to generate many varieties suiting to different agro-climatic and soil conditions. These varieties were also selected to meet changing agronomic requirements such as resistance against different biotic and abiotic stresses, climatic changes and food and fodder needs.

Over the millennia, many crop plants spread across the globe through natural processes, human migration, wars, trade, etc. In their new habitats, they got adapted and generated more variability, suited to the new environmental niches, under selection by local farmers. All along human history until recently, all farmers and breeders across the world freely shared the whole genetic resources of crop plants, irrespective of their centre of origin. The global crop genetic diversity was held as 'common heritage of mankind', with no specific ownership to either a region or a

country or a community or an individual.

This was despite the fact that each plant genetic resource is a product of considerable innovative efforts cumulatively achieved through intelligent selection and diligent conservation across thousands of seed cycles. During the long process of cultivation, selection and conservation in each region, farmers generated a vast body of traditional knowledge from their intimate understanding on each plant variety. This traditional knowledge on each variety in a way showcases its economic value. It would be largely true to state that modern plant breeding had not identified many new traits in most of the genetic resources, which were already not known to farmers. The collective socio-economic capital of this traditional knowledge and the plant variety diversity is so huge to estimate.

Origin of private right on plant genetic resources

It was this immense economic

potential of crop genetic resources and the modern market economic thinking that forced a new turning point to the time-honoured practices on this 'common heritage of mankind'. For the first time in human history, the United States of America in 1930 introduced ownership rights through patents on vegetative propagated plant varieties. Following this, in 1961, a few European countries joined together to establish Plant Breeders' Right (PBR) on newly bred plant varieties under the International Convention on the Protection of New varieties of Plants (UPOV). Since 1980, the USA and few other countries extended the patent to all plant varieties. The Uruguay Rounds on the General Agreement on Tariffs and Trade (GATT) started from 1986 culminated in the establishment of World Trade Organization (WTO) and the Trade Related aspects of Intellectual Property rights (TRIPS). TRIPS universalised the IPR protection on plant varieties. The TRIPS required all members of WTO

to provide intellectual property rights protection to plant varieties either by patents or an effective sui generis system or a combination of both. While patent is widely understood, sui generis system of intellectual property protection is less known. The Latin word sui generis means 'unique by itself' or 'generated by oneself'. A sui generis law on plant variety offers what is called the Plant Breeder's Rights (PBR). Unlike the patent law, the sui generis system of plant variety protection offers certain level of flexibility to a country for devising an effective PBR with due consideration to the socio-political realities embedding the law.

Plant Breeder's Right and embedded flexibility

PBR confers up on the breeder of a plant variety a right to exclude others from production, selling, marketing, distributing, importing or exporting of its seed or other propagating material. This exclusive right, *senso stricto* precludes farmers from producing seed or planting material from a crop raised from the seeds of a

protected variety and its planting back, sharing or exchanging with other farmers. In this sense, the PBR is similar to the patent right.

Origin of Farmers' Rights

Farmers' Right concept was mooted in 1983 by the Council of Food and Agriculture Organization (FAO), which was chaired by Prof M.S. Swaminathan, in response to the expanding intellectual property protection on plant varieties and its appropriation by plant breeders or seed companies. Respecting the national public opinion on intellectual property rights, India amended the Patent Law in 2002, where it did not allow grant of patents to plants and animals and their parts. Therefore, the only option left to India for complying with the TRIPS commitment on plant variety protection was the sui generis system. India legislated the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPVFR Act).

Framework of the Act

This Act has national mandate. The Act is administered by the Protection of Plant Varieties and Farmers' Rights Authority, which has a body corporate status with head office at Delhi. Currently the office is located at NAAS complex, Pusa Campus, New Delhi. Developing and refining test methods on the eligibility criteria of varieties, conduct of these tests,



characterization and documentation, indexing and cataloguing of all plant varieties, periodic publication of list of registered varieties, collection of comprehensive statistics on plant varieties, and ensuring availability of seeds all registered varieties to farmers are other responsibilities of the Authority.

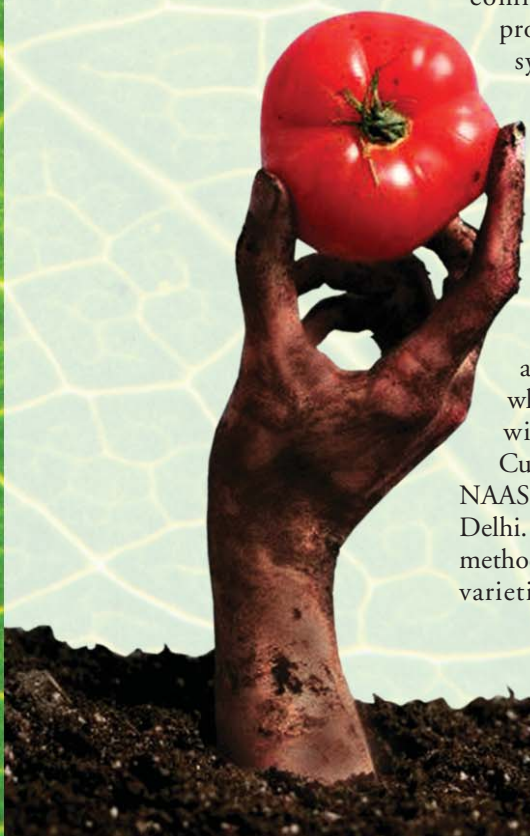
The Act provides for establishment of a Plant Varieties Protection Appellate Tribunal with jurisdiction on the jurisprudence of this Act.

Plant Varieties Registry

The process of granting intellectual property rights on plant varieties is called 'registration'. The IPR on plant variety under sui generis system is called as Plant Breeder's Right (PBR). The Registry is responsible for granting this PBR.

Crop Species and Varieties Eligible for Registration

The Act provides for the registration of new variety, extant variety and farmers' variety. Extant variety is defined as those varieties notified under Sec.5 of the Seed Act, 1966, or farmers' variety, or a variety, which is in common knowledge, or



any other variety in public domain. A farmers' variety is defined as a variety, which is evolved and traditionally cultivated by farmers', or a landrace or a wild relative about which the farmers' possess common knowledge.

Parties eligible for Registration

According to the Act, the eligible applicants for registration of plant variety are either the breeder of a variety, or any successor or assignee of such breeder, or any farmer or group of farmers, or community of farmers, or any person who is authorized to undertake the registration on behalf of the said farmers, or any university or publicly funded agricultural institutions. It is important that any party registering a variety should have adequate proof to prove to the satisfaction of the Authority that the applicant has reasonable claim on the candidate variety.

Eligibility Criteria for Registration

The Act provides two sets of eligibility criteria for the Registration of new variety and extant variety. Extant varieties are required to satisfy the three requirements, namely, distinctness, uniformity and stability. In addition to these requirements, the new variety is required to satisfy novelty.

Plant Breeder's Rights

According to this Act, a certification of registration for a variety shall confer an exclusive right on the breeder, or his/her successor, or the agent, or the licensee, to produce, sell, market, distribute, import or export the variety. This PBR shall be subjected to such limitations and conditions as may be specified in the rules and regulations. Two important limitations provided in the Act are the Researcher's Right and Farmers' Rights.



Farmers' Right concept was mooted in 1983 by the Council of Food and Agriculture Organization (FAO), which was chaired by Prof M.S. Swaminathan, in response to the expanding intellectual property protection on plant varieties and its appropriation by plant breeders or seed companies.

Duration of PBR and its maintenance

Registration of a variety, according to this Act offers PBR for a period of 18 years for varieties of trees and vines (eg. mango, apple, coconut, betel vine, grapes, black pepper, etc) and 15 years for varieties of annual crops (eg. rice, maize, green gram, yams, tapioca, cotton, etc). However, initial grant of the PBR is limited to nine years in the case of trees and vines and six years for other crops.

Benefit Sharing

Benefit sharing is a legally binding international commitment on India under the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic

Resources for Food and Agriculture. The Indian Biological Diversity Act, 2002 also stipulates the essentiality of benefit sharing whenever an IPR is to be established within or outside India on any product or process derived from the use of any components of Indian biodiversity or associated traditional knowledge.

Researcher's Right

One of the objectives of this Act is development of new plant varieties to promote accelerated agricultural development and supply of increasingly high quality seeds and planting material to farmers. This can be best served only with uninhibited access to the genetic resources available in the country for research and breeding. The Act seeks to facilitate such access through Researcher's Right (RR). RR allows access of any variety registered under this Act by any person for use in experiment or research, including use of such a variety for breeding new varieties¹⁶. Only one exception is that a registered variety shall not be repeatedly used as a parental line for commercial production of a newly created variety. When such repeated use is warranted for commercial seed production of the new variety, prior authorization of the PBR-holder of the variety, which is used as the recurrent parent, is mandatory.

National Gene Fund

The Act provides for establishment of a National Gene Fund (NGF) by the Central Government. The receipts to NGF may include contributions from national and international sources, benefit share deposited, annual fee payable for retention of registration of varieties and compensation awarded on plant breeders. The NGF is required to be used for disbursement of benefit share and compensation to the parties

concerned, promoting on-farm conservation of traditional varieties and wild species, for reward and recognition to conservers and sustainable use of genetic resources at community and Panchayat levels. Priority on conservation is to be given to regions identified as genetic diversity.

Farmers' Rights

India is considered to be the primary center of origin of about 168 crop species and secondary centre of diversity for many more crops. Indian farmers, over thousands of years, had been making continuous and rich contributions to the development, improvement and conservation of many traditional varieties of these crops and to the understanding and conservation of wild relatives of some of these crops. These traditional varieties and wild species are critical

resource base for improvement of these crops by modern plant breeding. Crop improvement in future to sustain global food security cannot be done without continued role of farmers in creating and conserving genetic variability. Fundamental to this signal contribution made by farmers is their traditional right on the seeds of plant varieties.. It is relevant to state that among many sui generis laws enacted across the world, it is only the Indian law which gives such triple recognition to farmer and accompanying FR.

1. Right on seed.
2. Right to register farmers' variety.
3. Right to receive equitable benefit sharing.
4. Right to receive reward and recognition.
5. Right to get adequate seeds of registered varieties.

6. Right to claim and receive compensation for under-performance of registered variety.
7. Requirement to seek consent of farmer.
8. Non-cognizance of innocent infringement committed by farmers.
9. Exclusion of farmers from paying fee.

Compulsory licensing

All IPRs have two important roles to serve. Building a monopoly on the innovation to achieve private gains and working of the innovation to serve the public interest by improving economic opportunity or quality of life. For ensuring the latter role of the IPR, most IPR laws invariably provide a clause like compulsory licensing. Under PPVFR Act, compulsory licensing shall be applicable to a variety on completion of three years from date of its registration. A registered variety may attract compulsory licensing when there is wide public perception that the seed of the variety is not made available to farmers in adequate quantity and that it is being sold at unreasonable or exorbitant prices. On satisfaction of these two grounds, the PPVFR Authority can grant compulsory license on a variety.

Penalty

The Act imposes stiff penalty for infringements of PBR, such as conducting unauthorized commercial transactions with the propagating material of the variety by either direct or deceptive methods. Relief on such infringements apart from prescribed penalty shall include ex parte injunction or an interlocutory order to confiscate documents and other evidences on infringement and if necessary, to attach the property of the defendant to recover the damages, costs and other pecuniary remedies awarded to the PBR-holder. ■

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Objective of the PPVFR Act

- To fulfil National commitment under Trade Related aspects of Intellectual Property Rights (TRIPS) of the WTO to provide intellectual property rights protection to plant varieties.
- To recognize and protect the rights of farmers' in respect of their profound contribution in conserving, improving and making available plant genetic resources for developing new plant varieties.
- To institute plant breeders right with a view to stimulate investment in research leading to the development of new plant varieties to catalyze and accelerate agricultural development in the country.
- To promote growth of seed industry to facilitate availability of high quality seeds and planting material to farmers.



Traditional Knowledge Preserve for the Posterity

Traditional Knowledge' (TK) is a community based functional knowledge system, developed preserved and refined by generations through continuous interaction, observation and experimentation with their surrounding environment. It is a dynamic system, ever-changing, adapting and adjusting to the local situations and has close links with the culture, civilization and religious practices of the communities. TK covers all spheres of human activity such as art, literature, health, education, agriculture, environment etc.

Significance of Traditional Knowledge

Significance of TK is exclusively linked with culture and society, well connected with community practices, institutions, relationships and rituals. It acts as a source for decision making of various developmental activities. This is also considered as a valuable

asset of the poor, helping them to shape and control their own development.

TK in development helps to increase efficiency and is cost effective and helpful for developing appropriate technology. Effectiveness of TK improves chances of adoption and is an integral part of local communities. Sustainability of TK facilitates mutual adoption and learning, and empowers local communities.

Documentation of TK

Recently, Tropical Botanic Garden and Research Institute, Thiruvananthapuram, completed the systematic documentation of TK associated with plants used for food and medicine in 70 Gramapanchayaths (five each from all 14 Districts) of Kerala. During this period we have documented 10,999 (7667 single and 3332 combinations) information based on TK related to

plants used for medicine. Out of this, 9467 information (6584 single, 2883 combination) was documented from non-tribal communities and the remaining 1532 (1083 single, 449 combination) was gathered from tribal communities. The above information was recorded from 625 different plants exclusively used for medicinal purpose. Apart from this, we have also documented 650 information on food plants. The preparation of database based on the above information is in progress. After completion, the database can be used for various developmental activities of the State through plan process with R & D interventions.

Intellectual Property

Intellectual Property is a category of public law that generally includes Patents, Copyrights, Trademarks, Geographical Indications, Industrial Designs, Utility Models, Plant Breeders Rights, Integrated Circuits

Rights and Trade Secrets. A sui generis regime for databases has also been established in some countries.

How to protect TK

The Convention of Biological Diversity (CBD), which has come into force from 1993, is a unique international legal instrument to protect the sovereign rights of the countries and people over their biological resources including medicinal plants.

CBD explicitly recognises the sovereign rights of the state over their biological resources [Article 15(1)], and the need to respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities and share with them the benefits arising from their use [Article (8)]. CBD also recognises under Articles 15(1), the sovereign rights of state over their natural resources and the authority to determine access to genetic resources subject to national legislation. Article 15(4) and Article 15(5) subject this access to other contracting parties on 'mutually agreed terms' and 'prior informed consent'. The Convention thus establishes a new international legal



The Intellectual Property Rights Policy for Kerala, released by Chief Minister, V.S. Achuthanandan, on June 27, 2008 says that all traditional knowledge, including traditional medicine, must belong to the domain of "knowledge commons" and not to public domain.

frame work to assist the sovereignty of states over their genetic resources and authority of states to determine access to resources requiring prior informed consent on mutually agreed terms and confirming that countries providing genetic resources are entitled to fair and equitable share of benefits that arise from their commercialisation.

The Intellectual Property Rights Policy for Kerala, released by Chief Minister V.S. Achuthanandan on June 27, 2008 says that all traditional knowledge, including traditional medicine, must belong to the domain of "knowledge commons" and not to public domain. The system should be introduced through legal arrangements. While community or family custodians will have rights to knowledge that belonged to them, the rest of the traditional knowledge will belong to Kerala State.

Tasks ahead

TK associated with biodiversity includes both documented (codified) as well as non-documented (oral tradition) information, which are accepted

as cultural components of biodiversity. If these are not preserved and documented, they are likely to be lost forever in the modern materialistic world. Hence, there is scope and urgent necessity to carry out systematic documentation of TK associated with Biodiversity and is also highly essential to protect the TK under sui generis system by establishing different viable models. Systematically documented TK will provide valuable information that is highly beneficial to the research workers for developing new processes, products, patenting, technology transfer, commercialisation, benefit sharing etc. It is also possible to make TK cost effective and helpful for developing appropriate technology. This will further lead to the integration of the TK into the planning process for the developmental activities at the grass root level. Formulation and implementation of effective technical and legal frame work/policy to check bio-piracy is an area to be looked into. ■

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India has modified all its intellectual property related laws and the country is 'TRIPS compliant'. The very issue of intellectual property rights in the country is contentious, but an understanding of the general principles and the law of the land is more logical than debates for the sake of debates.

A public speaker on Intellectual Property Rights seldom misses the 'success story of turmeric'. The speech is incomplete without lamenting on 'ayurveda' not being patented in the country. After reading a recent news item on 'Palakkadan matta' and 'Navara rice, receiving a Geographical Indication (GI) Registration, I heard a soliloquy: 'now they cannot get matta 'patent'. These examples are intended to highlight the prevailing confusion in the general understanding of intellectual property rights. GI and patents are not the same. Copyrights and designs are two other intellectual property rights. Trademark is another right and the list is complete with topography of integrated circuits and trade secrets. Patents are only for new (novel) inventions. Ayurveda is a known form of practicing medicine and as such there is nothing 'new' for a patent.

The versatility of human mind designs new machines, invents new medicines, creates wonderful stories and all these belong to the domain properties of mind or more simply intellectual properties. Just as we have various rights on our tangible properties, the rights bestowed on the owner of the intellectual property come under the umbrella of IPR. Even though various forms of IPR have been in vogue for more than a century, recent birth of world trade organisation has brought the trade related aspects of IPR into foray.

Novel Se

To put it plainly, patents are for inventions, not known so far and having some commercial value. After all, if it is not for commerce, why practice the property rights! But most of the grassroots inventors are not aware that by disclosing their invention in public they stand a chance to lose the novelty making it ineligible for the grant of patent. Now a days, applying for a patent in the country is perhaps as easy as applying for a passport, but the general feeling that patent is only for high-techs prevents many an inventor from processing a patent for filing. Albeit all the recent felicitation initiatives, patent still is at the bottom of the black box. What we need is to tell every resourceful mind that any new and useful invention, however small can be translated to the wealth for the nation and also to create resource for guidance. It is laudable that Kerala is planning to push IPR



Property secured



as a compulsory paper for degree syllabus and to propose including a few chapters on IPR in High School and Higher Secondary School Classes.

Copyright is the right to prevent others from copying. But almost everybody takes it as the right to copy. Copyright broadly subsists of works



of original literary, dramatic, musical and artistic nature, cinematograph films and sound recordings. This illegal act of copying some one else's work without the right to do is an offence. A copyright owner can take legal action against any person who infringes the copyright in the work. The copyright owner is entitled to remedies by way of injunctions, damages and accounts. The author of a work has the right to claim authorship of the work and to restrain or claim damages in respect of any distortion, mutilation, modification or other acts in relation to the said work which is done before the expiration of the term of copyright if

such distortion, mutilation, modification or other act would be prejudicial to his honour or reputation.

Moral rights are available to the authors even after the economic rights are assigned. In comparison to other intellectual property rights acquisition of copyright is automatic as soon on as the work is created and it does not require any formality. However, certificate of registration of copyright and the entries made therein serve as prima facie evidence in a court of law with reference to dispute relating to ownership of copyright.

One simple form of intellectual property, which is easy to process but still rewarding, is the 'design'. Design is for the exterior 'look' and aesthetics. The functional aspects of the product should not be reflected since this is in the domain of patent. Design is an integral part of the article and thus a label is not a part of the design. The commercial value in the appearance of the article is key to the success of design registration so that no one can copy the design. While patents are valid for 20 years, design registration is for ten years, extendable for five years.

In this 'branded' world trademark is very important in promoting a product. A trademark (popularly known as brand name) in layman's language is a visual symbol used by one undertaking on goods or services

to distinguish it from other similar goods or services originating from a different undertaking. It identifies the actual physical origin of goods and services. The brand itself is the seal of authenticity. Trademark guarantees the identity of the origin of goods and services and stimulates further sales.

Coming back to Palakkadan matta, the rice variety has derived its special place because of Palakkad. Similarly there are many products which are identified with their geographical origin. This geographical indication is another intellectual property right. Thus Geographical Indications of Goods are that aspect of industrial property, which refers to the geographical indication referring to a country or to a place of origin of that product. Typically, such a name conveys an assurance of quality and distinctiveness, which is essentially attributable to the fact of its origin in that defined geographical locality, region or country.

India has modified all its intellectual property related laws and the country is 'TRIPS compliant'. The very issue of intellectual property rights in the country is contentious, but an understanding of the general principles and the law of the land is more logical than debates for the sake of debates. ■

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Kerala is highly enriched with biotechnology and associated rich traditional knowledge. It is occupying only a landmass of about 1.18 percent of the nation. About 9400 square kilometres in Kerala are forestland. However, the State has flora of about 10,735 species, which is about 22 percent of flora of the country.

Kerala has a good past record of health tradition and we know a lot about medicinal plants. Such knowledge is believed to be divine. Generally this knowledge is neither published nor commercialised. Though information about 16,000 medicinal plants and 650 plants which can be used as food items have come out, much remains still unexplored. Out of these, tribal people have contributed information on 1125 varieties. However this knowledge is on the verge of extinction.

Traditional knowledge regarding medicine is of two types: classical and oral traditional knowledge. Knowledge enshrined in Shruthi or veda is included in the former category. Among the four Vedas, Rigveda and Atharvaveda, though purely religious works, contain information regarding classical traditional knowledge of ancient

Indian medicine. Astangahridaya and Sushruthasamhitha, the famous treatise on surgery and the famous Charakasamhita are the pride of our ancient Indian tradition and culture.

Tribal and non-tribal people, especially those from backward castes in Kerala who are administering medicine to patients suffering from jaundice, mentally challenged persons and those who are concentrating on toxicology are unique to our culture alone. The folk healers of Kerala who are practicing Ayurveda by using medicinal plants brought directly from forests are also the assets of the state.

It is high time that valuable information from the knowledge of indigenous people should be scientifically compiled, documented and patented. Voluntary organisations should come forward to arrange programmes to make the tribals aware

Voluntary organisations should come forward to arrange programmes to make the tribals aware of the need of transferring their valuable knowledge for the common good of the whole world.

of the need of transferring their valuable knowledge for the common good of the whole world. For this purpose they can resort to the assistance of a joint effort between scientific and academic field. It should also be born in mind that mere knowledge cannot be patented. Research and Development programme is necessary. That means some new product should be formed out of the knowledge. It should not also be forgotten that in some countries like United States, one could take patent of new use of a known product.

It should be brought to the notice of the international legal community that something is happening in the East and that Ayurveda is the sole product of us. It should be recognised as a special privilege for us. Though there are international rules and regulations for patents, legal jargons

Indigenous Knowledge Does it Reveal?

and cumbersome formalities involved in patenting, technology transfers are not common to laymen.

Government and voluntary organisations should take immediate steps to formulate effective protective measures for the traditional knowledge associated with medicinal plants in Kerala under the sui generis system. Accordingly, the country itself can make laws. So there should be a strong will on the part of the legislature and the political luminaries in our system to make laws of our own for protecting Ayurveda and our traditional knowledge.

The most important hurdle in the path of documenting such traditional knowledge is that such tribals are not willing to disclose the precious

knowledge to anybody. Towards the end of their life, they hand over it probably to their sons and that too very confidentially. It is very interesting to note that some are not willing to disclose the same to even their daughters because of the fear that such precious knowledge may leak out of their family circle through such female issues when they get married to other families.

They are also afraid that if such knowledge is disclosed, the medicine will not work out. It is a notion, which has crept into their sub conscious mind through generations. It may be an excuse found by the ancient physicians to escape from the pressure exerted by the Lords of that period to disclose the composition of the

medicine administered by them.

So it is high time enlightened them of the need of disclosing traditional knowledge. They should be taught that as long as they do not want to keep such knowledge as trade secret, they should come forward to disclose the same.

The tribals may be taught that they should not hold anything connected with the knowledge as the Government gives patent. They should be convinced that the precious information they are disclosing will be reaching in safe hands and that they will not be exploited in the guise of patenting. They will be rewarded and awarded adequately.

Follow up action of the knowledge collected from them including research and development activities are also very important. It should be ensured that such precious knowledge is commercialised and lion share of the benefits arising there from should be given directly to the knowledge providers. Remaining fund can be spent mainly for the welfare of the tribals of the area from where the knowledge emerges and for planting medicinal plants. It is also important that an effective legal framework should be shaped to safeguard the traditional knowledge preserved like treasure by the tribals from pirates. ■

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Intellectual Property Rights Courses New Avenue

The World Trade Organization (WTO) envisages free trade of products in a transparent and competitive environment, leading to smooth trading activities. Several agreements on agriculture tariffs, subsidies, sanitary measures and intellectual property rights have come under a single roof of WTO as GATT agreement. More than 100 countries including India knowingly or unknowingly entered in to this global

trade regime to promote economic development across the globe. WTO forces member countries to open up their economy to a free flow of imports and exports. Market access, domestic market and TRIPS are the key elements pertaining to WTO in the Agriculture sector.

In the post WTO era, Intellectual Property Rights acquires more importance. United Nations has started

World Intellectual Property Organisation (WIPO) at Geneva in order to address the emerging issues. UNCTAD (United Nations Council for Trade and Development) is funding projects on IPR issues for getting sustainable results. Patenting, copyrighting and trade marking should be emphasised nowadays. As a sequel to growing importance given to IPR issues, there is a trend towards IPR in the educational and career sector within the country and abroad. Various types of courses catering the need for addressing IPR issues at different levels are available in the higher education sector. Post graduate; post diploma and certificate courses on IPR are available in the country and abroad. Though any graduate can join for the programme, science and engineering graduates will be given preference during admission process. Major objectives of this programmes are to disseminate information on national and international IPR issues, to create awareness on IPR among scientists, professionals, academicians, government officials, planners and entrepreneurs and to popularise the documentation and administrative procedures on IPR. These courses are very much useful to lawyers, research students, professionals, engineers, scientists, brand managers, chartered accountants, regulatory officials and company secretaries. Courses cover wide areas like different patent laws, protection, copyrights etc.

IPR experts can ensure rights of creators and owners of intellectual property throughout the world. They can carry out tasks like administering international treaties and assist the governments, organisations, farmers, industries and private sector in the emerging IPR issues. There is increasing career potential for IPR professionals in different domains like patent laws, trade marking, patenting, geographical patents, regulatory system etc. that is an emerging area of research. So there is great potential for scientists, teachers and lawyers in the higher education sector. Many professionals can diversify their

activities related to IPR issues. Lawyers can specialise in patent laws and can work as consultants.

Different courses on intellectual property rights are available in the country. Indira Gandhi National Open University has recently started one-year post graduate diploma in Intellectual Property Rights in collaboration with WIPO. Details can be had from www.ignou.ac.in.

Rajeev Gandhi institute of Intellectual Property Rights based at IIT, Kharagpur has LLB, MBA and Post diploma programmes with specialisation in IPR. The programmes cover wide areas like Patent law and Practice, IP specifications and Transactions, Copyright, Drafting and IP Management, Registration, Commercialisation and Technology. Sri Dharmasthala Manjunatheswara Law college, Mangalore has one year post diploma programme in IPR.

Some institutions are conducting four to six months certificate programmes in intellectual property rights. They are SVKM institute of Intellectual Property Studies, Vile Parle (W), Mumbai-400 056 Email-info@iips.ac.in; Academy of intellectual Property studies, Mumbai-400 104 Email-info@aips.ac.in.

Courses Abroad

Post graduate diploma programmes in IPR are available in Australia, Philippines, New Zealand, England, Ireland, The Netherlands, USA and Canada. Collaborative programmes in IPR are available at Bangalore, Delhi, Chennai and Mumbai in association with University of Washington. Visit www.giipinfo.com for more details.

Japanese patent office and Japan Institute of Invention and Innovation is offering training and awareness programmes in intellectual property protection in India. Canadian, Australian and UK institutions are offering advanced post graduate and post diploma programmes in IPR. ■

The writer is a career consultant

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can lead
you through
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Excerpts of the inaugural speech
made by V.S. Achuthanandan,
Chief Minister, at
Kerala Travel Mart 2008
in Kochi.

I am happy to announce the inauguration of Kerala Travel Mart. I heartily welcome all tourists and delegates from within the country and abroad on behalf of the State Government.

Kerala Travel Mart has been contributing in a great way towards the development of tourism in the State. Travel Mart helps us to identify and develop the market and boosts up the income from tourism industry. Travel Mart is a society formed by many companies and institutions functioning in the tourism sector. I wish this international business meet organised jointly by Travel Mart Society and Tourism Department to be a grand success. Joint ventures of private and public sectors in tourism sector can achieve greater heights. Travel Mart is an example of such participation.

Join Hands For Greater Heights



In the past two years, there has been significant growth in the tourism sector of Kerala. Last year there was a 20 per cent growth in foreign tourist inflow and a 25 per cent increase in revenue. Kerala has become the prime tourist destination in the country. Domestic tourism also needs to be

encouraged alongside foreign tourism. There was a 22 per cent growth in domestic tourists in the State last year.

The different institutions functioning with the tourism department, especially KTDC, have made a good track record. KTDC has achieved the highest profit for the last

four decades last year. We were able to start Kerala House in Mumbai and have started construction of Kerala House in Chennai and Tourism Information Office in Mysore. The construction of Marina to anchor luxury yachts at the beautiful Bolghaty is underway in Kochi. This

Initiative to Strengthen Tourism Ties

The draft Tripartite Agreement for Cooperation in the field tourism was signed between India, Brazil and South Africa at the Workshop on India Brazil South Africa (IBSA) at the Kerala Travel Mart 2008.

Inaugurating the workshop, the Minister of Finance, Thomas Isaac stressed on the need to increase and strengthen economic and cultural ties between the three nations. He said that the Government of India has taken great efforts to bring about this tripartite agreement into a reality. The Minister said that this would help develop better understanding of the tourism products in each other's country.

Presenting the Incredible India presentation, Leela Nandan, Joint Secretary said that the agreement was a prelude to the future agreement and aims to promote cooperation in the area of tourism as well as provide for better understanding.

The IBSA initiative that aims to extend South-South cooperation is beginning to take shape five years after it was initiated. The IBSA formation, started in 2003, has now gained momentum as a cross-continental, trilateral forum that is now "beginning to be noticed" by the rest of the world. In terms of trade — widely seen as probably the most important for the trilateral axis — the

combined value at the end of last year had reached over \$10 billion. This means that the three countries could feasibly see their target of \$15 billion in turnover from combined trade by 2010 being exceeded.

On behalf of Brazil, Carlos Rebiero, Diplomatic Officer, Brazil and Zukiswa Nkherianya, Deputy Director, Tourism and International, Government of South Africa presented presentations on their countries tourism potential and possibilities. Both of them expressed





is the first of its kind in the country.

Within three years travelling from Kovalam to Neeleshwaram through inland waterways will become a reality. This will benefit the tourism sector in a big way. Infrastructure development is inevitable for the growth of tourism industry. In the last two years, great growth has occurred in this field also. Vizhinjam

international container transshipment terminal and Kannur airport projects are about to be materialised within three years. All blocks are cleared for the Vallarpadam Project.

Efforts are on to start the metro rail project. The process to convert the national highways into four lanes is also underway. This will bring Kerala into the forefront in infrastructure

development. Kerala's development and progress have always been recognised at the international level and I hope the foreign delegates who are here to attend the KTM will experience the same.

The Government has acknowledged tourism as a futuristic industry like the IT industry. If the generous assistance from the Central Government is also materialised, Kerala can be changed into the tourist destination of the world. Kerala shows the highest growth rate in terms of tourists' arrival and infrastructure development. According to the World Tourism organization statistics, Kerala has superseded Turkey to get this achievement.

The diverse scenic beauty of the state and the progress of the society here have made Kerala a leading tourist destination in the world. We should bear this in mind in all endeavours in the future.

Wishing once again the 5th Kerala Travel Mart all success. ■

confidence that the initiative would bring more revenue to all the parties. Vijay Thakur, IATO made a presentation on the tourism products and the possibilities of interaction between the tourism bodies and industry. Dr. Venu IAS, Secretary Tourism, Government of Kerala initiated the deliberations of the workshop.

Responsible Tourism Initiatives

The efforts being made to promote Responsible Tourism practices in Kerala is one of the main focus of the fifth Kerala Travel Mart 2008.

"As part of highlighting Kerala as a Responsible Tourism destination, Kudumbasree- association of women's self help group and some rural-development agencies have showcased their products and capabilities at the Mart" says Dr. Venu. The exhibition would provide an opportunity to identify the buyers eco-friendly tourism products and would give

The response of the buyers and sellers has been overwhelming. There are possibilities of very good interactions among buyers and sellers and will lead to increased business in the tourism industry.

them a first-hand experience of the State's efforts to strengthen Responsible Tourism in this part of the world, he said.

Kudumbasree is trying to exploit the potential offered by Responsible Tourism, which is being pursued by the state government with the objective of making tourism sustainable. Kudumbasree authorities believe that responsible tourism initiative is best suited to them as it gives local entrepreneurs an assured market. The agency is trying to reach an understanding with the service sectors to ensure timely supply of demanded items in coordination with the tourism

department.

The Minister of Home, Tourism, Kodiyeri Blakrishnan inaugurated the KTM Exhibition. After the formal opening, the Minister visited the stalls of the sellers showcasing a wide range of tourism products like home stays, house boats, health tourism, Ayurveda, Diamond tourism.

The response of the buyers and sellers has been overwhelming. There are possibilities of very good interactions among buyers and sellers and will lead to increased business in the tourism industry. Around 25-30 appointments have been made and the turnout has been as per expectations.

If violence is inherently a part of human nature, unalloyed use of violence is sought to be restricted by the society and moral forces. Manifestation of violence in various forms has become an exception rather than a rule in modern times. People willingly left the 'solitary, nasty, brutish and short life, which they were leading and embraced democracy as it paid them well in more than many ways.

Since the establishment of nation states preservation and expansion of the rights of individuals have assumed increased significance. The growth of the rights regime has the advantage of creating a new consciousness in the society; that certain rights are so important and sacrosanct that it cannot be alienated from the individuals. Of all human rights, the right to life has come to represent the most inviolable and whoever wants to extinguish it has to follow a procedure established by law.

Collective retribution against an alleged wrongdoing is not done through the old principle of 'an eye for an eye'. Only the state has the legitimate right to use force or a collective of nations (under United Nations Charter) can have the right of retaliation. Conventional wars are still the prerogative of nation states, but the states cannot arbitrarily exercise force as certain

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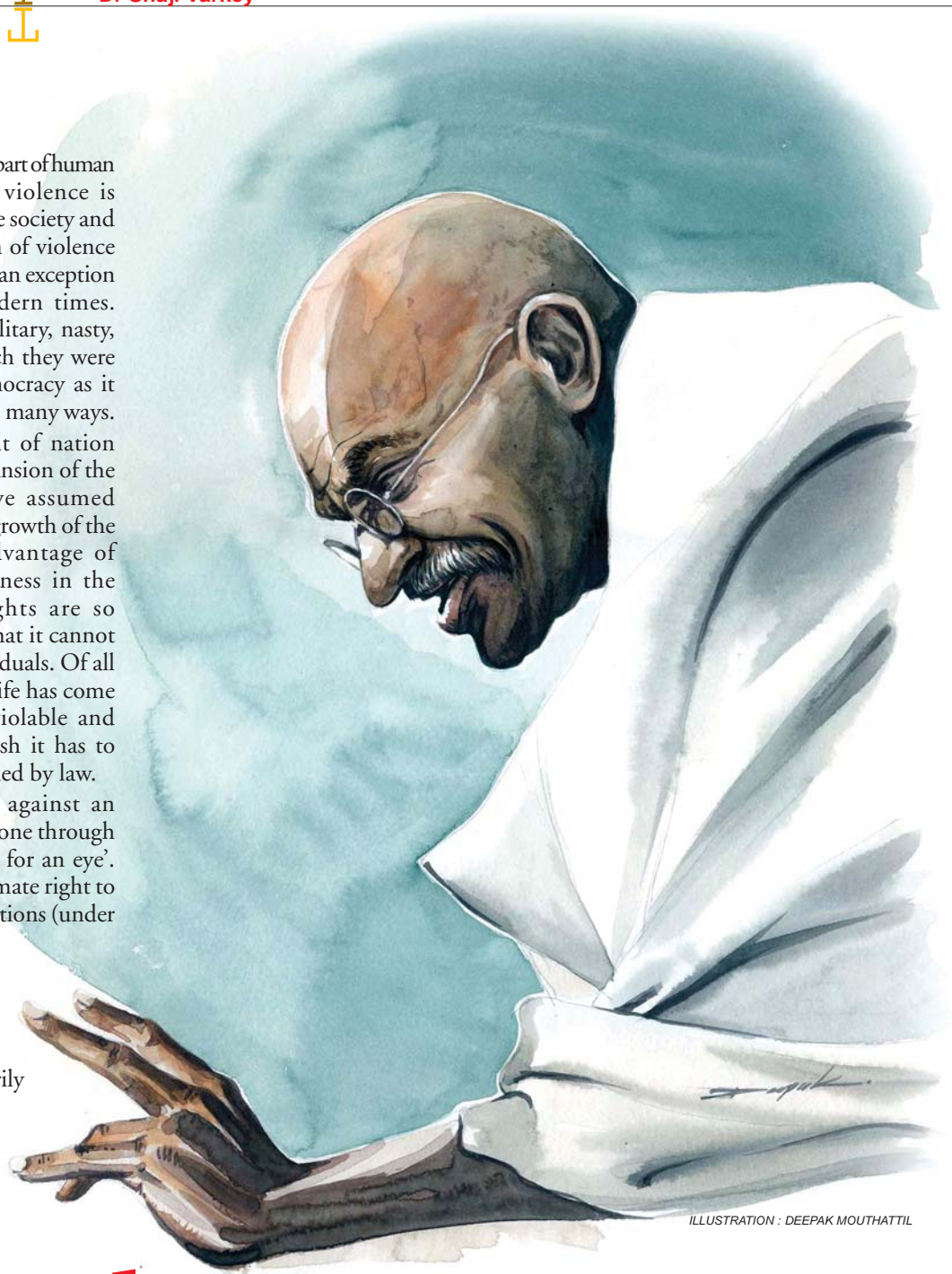


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Violence Not the Way

Violence Not the Way

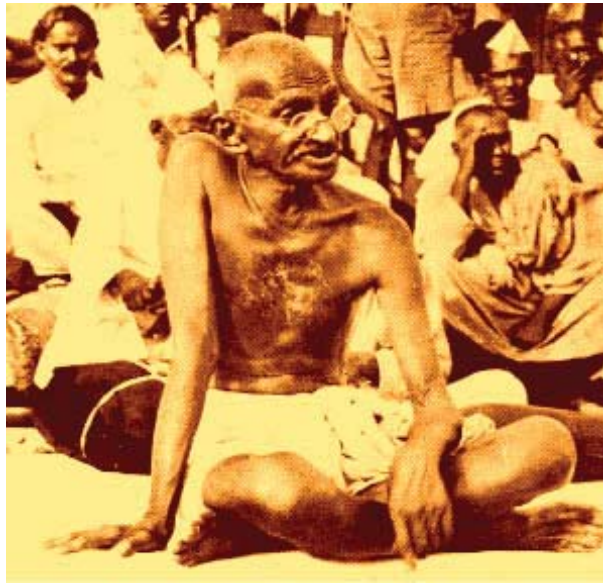
weapons and certain practices are inhuman and morally reprehensible.

While the wars between nation states have been regulated, the sub-state manifestations of violence like ethnic, communal and sectarian strife, regional and linguistic struggle, armed conflict for self-determination etc. proliferate. It takes a larger toll of human lives and creates greater social disruption.

The psychological wounds of such wars fester and breed disgruntled individuals or groups seeking retribution. Form guillotine during the French Revolution to dynamite bomb, on to hijacking, truck bombs and suicide squads, the terrorist practices tend to be more destructive and techno-savvy. The reasons why they choose 'soft targets' have been that such 'propaganda by deeds' creates awe in the minds of their opponents, admiration from those who support the cause and additionally; the required visibility in the media. Those who practice violence as a creed do so without any moral compunction as they are ideologically imprisoned in a small world where only two entities exist; a 'just cause' for which they stand and the enemy which needs to be exterminated physically. Just war theory, which was so popular during the medieval times no longer holds good during our times. Though a distinction is being made between a terrorist and a freedom fighter, the means the latter employ to achieve their objectives often smack of terrorism.

No person is born as a criminal or a terrorist. They are being made by the society in which they live. Any lasting solution to the menace of terrorism therefore involves the

elimination of the root cause of injustice. For many states terrorist witch hunts have become a favourite pastime. This can trigger new social forces with extremist orientations and as a measure to counteract this state starts creating an elaborate network



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of institutions and laws.

An iniquitous society with poor human development is an ideal place for the growth of terrorism. The pattern of global terrorism shows that where social equality, human development and democracy are high, the influence of terrorism would be marginal.

With the spread of terrorism in the society, the general level of violence increases. It can be of two ways: An increased use of coercive force in the society and the consequent negation of the rights of citizens can lead to the repudiation of the central authority and the creation of de facto authority

structures which mete out justice. Secondly, as the aggregate level of violence in the society increases, all civil society discourses treat 'violence' as natural and abrogation of the rights as non-events.

Violence is a structural feature of the contemporary neoliberal global order. The system perpetrates violence not only with force but with consent as well. The myth the capitalist world creates is that the present pattern of development is the ideal one and that there are no alternatives. Gandhi figures in this context. He advocated a world that is large enough to serve the needs of all not the greed of a few. Gandhian principles cannot be employed to troubleshoot the situation or for that matter to tinker with the system. It is a philosophy and a worldview. As Gandhi rightly says his philosophy is not meant to be taught but practiced.

Gandhi never supported violence or terrorism. "I don't regard killing or assassination or terrorism as good in any circumstance whatsoever. According to him "armed conspiracies against something satanic is like matching satans against satans. But since one satan is one too many for me, I would not multiply him" He

was not sympathetic to those who use force for national freedom. They are "blind lovers of liberty and freedom" for Gandhi. He repeatedly said that the religion of non-violence was not meant merely for rishis and saints but was relevant to common people as well. The issue at stake is a choice for the humanity between a linear and one-dimensional capitalist trajectory and a world, which has effectively eliminated the contexts for all kinds of violence. Only in the latter world that Gandhi and myriad versions of Gandhism find relevance. ■

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Thirakkadha Treatment

Novel



From blockbusters to middle cinema; from extravaganza of words to maturity of visuals-Nandanam , Kayyoppu and Thirakkadha show remarkable ascent in the career graph of director Ranjith. His latest film Thirakkadha may be considered as an attempt towards the search for a new treatment in Malayalam Cinema marked with a fresh story line and characters.

The protagonist of the film is Akbar Ahmad (Akki), a very committed filmmaker. With his debut film, he has become a celebrity in the world of good cinema. He runs a coffee shop 'Casablanca'. Surprisingly, Casablanca is the name of the celebrated Hollywood classic and the posters and stills of outstanding film classics decorate the interiors of the shop. Akki is always in the company of his girl friend Devayani and other colleagues who constitute the film crew. In the search of a new story for his forthcoming film, he lands upon the life story of the superstar Ajayachandran (Ajay) and Malavika (Malu), the heroine of yesteryears who were husband and wife for some time.

During the course of his journey through the life of Ajay and Malavika with the help of the diary notes of late director Aby Kuruvilla and the fragments of information of many more, Akki realises that he cannot make a film based on it. Instead, he is all the more concerned about Malavika, the ailing cancer patient and becomes instrumental for the reunion of Ajay and Malavika with all their misunderstandings cleared.

The story line and the treatment of Thirakkadha by Ranjit himself draw unusual strength and warmth. The film has a layered structure. From Akki's soliloquy to his narration of the story to his friends, the first hand account of the experiences of various directors with the duo, cinema within the

cinema and the actual incidents in flesh and blood, it is placed in different cinematic space and time. As a filmmaker, Ranjit has effected the transition from one sequence to the other with utmost ease and brevity.

The brilliant cinematography by M.J. Radhakrishnan is one of the positive attributes of the film. Except in one sequence where Ajay and Malu celebrate their first night, the songs, penned by Rafeeqe Ahmed and scored by Sarat, have little place in the film. The interview of Akki by an FM radio team and the song and dance followed is absolutely out of place in a film like Thirakkadha. The art by Sabu Ram and makeup by Ranjit Ampadi also deserve special mention.

As an actress, the National Award winner Priyamani is in one of her finest performance as Malavika. Of course for Anoop Menon, the character of Ajayachandran is a break. He tries hard to fit in the character of Ajay. Samvrutha Sunil, Nishant Sagar, N.L. Balakrishnan, Vineeth and a host of others look like mere set properties. The director Ranjit also appears as the director Aby Kuruvilla who has significant role in exposing the past of Malavika and Ajay. Nandu as Ajay's makeup man cum secretary, Augustin and Cochin Haneefa as producers, Manian Pillai Raju as the film director, Praveena as the present wife of Ajayachandran, V.K.Sreeraman as the father of Akki, Suresh Krishna as the doctor, Mallika Sukumaran as Malavika's mother and Jagannatha Varma and Poojappura Ravi as cine artistes in the cinema within the cinema have contributed significantly in their brief appearances.

Thirakkatha, produced by Ranjith and Maha Subair, in fact, experiments on a new style of story telling. No doubt, the film is built with the bricks of excessive sentiments and melodrama. Yet, Ranjit as a scriptwriter and director can indeed be proud of his new effort that could be definitely categorised as a clean middle cinema serving as a beacon to new generation productions. ■



Wishbone The Colourful

Torenia or wishbone flower is a colourful, modest sized plant that thrives in shade, hot and humid weather. It is a summer annual that grows equally well in sun or semi shade.

Torenia is named after Olan Toren, a Swedish clergyman who discovered *Torenia Asiatica* while travelling in China in 1750. Torenia plants make a compact, upright bush of 8-12 inches in height. The pale violet flowers have deep purple blotches on the lower petals with yellow blotch on the lip. In the Centre, the stamens are arranged in the shape of a wishbone, have the common name. Flowers bloom throughout the summer and the cool colours are a welcome relief during the heat of summer.

Torenia needs a warm climate and well drained, compost enriched soil. They like humidity and will not tolerate being dry. Keep the plants well watered, especially in hot water.

Torenia is propagated by seeds as well as self-sowing. Seeds are tiny and slow growing. Sow seeds 10 to 12 weeks prior to outdoor planting. Cover them lightly with soil. Transplant seedlings 6-8 inches apart. Since the plants have a nature of self-seeding, watch for the tiny, fragile seedlings near the mother plant. They can also be properly transplanted into pots, boxes or baskets filled with a suitable potting mixture comprising of soil, sand and dried cow dung in the ratio 2:1:1. Apply soluble plant food regularly to help maintain growth throughout the long flowering period. Watch for slugs.

When the plants are small pinch shoots off gently to encourage them to bush out. Fertilize every two weeks with a fertilizer mixture, properly diluted.

Torenia can be grown as edging, border, in rock garden, pots, window boxes and hanging baskets. It is a good candidate for formal beds and suitable along paths, walkways etc.



Tourism is a fast growing economic and industrial activity of immense global importance. It is perhaps the largest industry in the world today. It has become a very effective instrument for generating employment, earning foreign exchange, improving infrastructure facilities, helping regional development and thereby facilitating overall development of the economy. This smokeless industry has its own social, cultural, economic and environment ramifications.

Kerala is a lovely State with sparkling streams, shimmering lake waters and lush blue coastal areas situated between the Western Ghats and the blue waters of the Arabian Sea, and blessed with abundance of

monsoon. The western ghats with their high peaks and deep ravines, the undulating interior with its many hills and valleys and the palm fringed coastal area with its lakes, lagoons, canals and lake waters provide a unique feature of tourist attraction. It is true but did anybody try to measure the impact of tourism industry on the environment?

Health Tourism in Kerala is a recent origin, which attracts the tourists to our traditional Ayurvedic and Panchakarma treatments. It is an important tourist attraction in Kerala. Health tourism has become an important aspect of the business and marketing of tourism for clients seeking specific treatments for health related facilities and services.

For the foreigners, healthcare, eco tourism, beach and lake water holidays are high end products in Kerala. Pilgrim business and convention tourism are low end products for them. For the domestic tourists, eco tourism, pilgrim healthcare and lake water holidays are regarded as top-end products and convention, adventure and hill resorts tourism as low-end products.

Among the different tourisms, Pilgrim is the one and only one which do not affect the environment directly. Sabarimala, a purely forest area, is a pilgrim center where crores of people come. In 2006, nearly three crore devotees visited the shrine, which has increased to 3.5 crores in last year.



Most of the people who visit Sabarimala stay in Kerala for five to 10 days, clubbing pilgrim tourism with backwater, eco, beach tourism etc. During the Sabarimala season, lot of environment pollution is caused due to the huge crowd beyond the limit; the sensitive forest area can be accommodated. The forest areas and the Pamba River get polluted through the discharge of wastage and disposal of plastics by the people.

Houseboats are attracting many tourists to Alappuzha. The number of houseboats is increasing day by day and most of them are not constructed as per the specifications. Now there are nearly 750 houseboats in Alappuzha. Many of the boat owners do not follow the instructions issued by the Government. This leads to pumping of wastages to the Vembanad Lake, which may create some ecological imbalance in the near future. If we closely observe the backwaters, it can be seen that during the season daily 500 to 900 liters of Kerosene is excreted to the Vembanad Lake and the number of coliform bacteria are increasing dangerously. It is worth to mention here that the Dal Lakes in Kashmir are protected without allowing motorised boats. There, a tourist can enjoy the natural beauty only in small country boats operated manually by Village men.

The Kandal forests on the eastern side of Vembanad Lake are almost destroyed; the water birds once seen



in the Vembanad Lake side are disappearing day by day. Kumarakom, the most famous tourist centre, which attracts both foreign and domestic tourists is on the side of Vembanad Lake. The Vembanad Ecosystem is to be protected from indiscriminate exploitation of nature by the mankind. We should realise that nature is created not to meet the greed of present generation, but it has to be transferred to coming generation without any harm.

The famous Nehru Trophy Boat race at Alappuzha in the Vembanad Lake is declared as water sport by the Government of Kerala this year. It attracts many people from different parts of the world. Now it is an important tourism attraction in Kerala. This water game affects the

environment through the disposal of wastage by the people. In the eagerness to blow up the statistics of income generation, we fail to see or become blind on the loss of natural resources including fish, mussels etc. The traditional fishermen community are denied of their right of livelihood by the so called tourism mafia by amassing the coastal lands of lakes and sea restricting the access of the local community.

There is no doubt that this fast growing industry may affect the environment too fastly along with its growth, with the plastic disposals in the tourist spots, huge use of petroleum products polluting water, soil and air, water theme parks affecting the water resources, tourism lobby's construction of hill resorts in Wagamon and Munnar by encroaching the areas and destroying the natural beauty etc. The above mentioned is not a single case. It may be the same for all tourism. Also there is a great chance for terrorism growth along with tourism growth, which is going to be our next problem. It is a dangerous aspect to be cautioned.

Therefore it is better to conduct a detailed study on the impact of tourism industry on the environment and think about the precautionary measures to be adopted to arrest the adverse effects of tourism growth. ■

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Arrest Adverse Effects



Mental Health Needs Priority

World Mental Health Day is an international educational campaign, which aims to extend knowledge on mental health. For the first time in 1992, it was observed by the World Federation for Mental Health as an annual activity. It is celebrated on October 10th every year.

Each celebration of this global event holds a theme that aims to focus the concerns of the World Federation for Mental Health (WFMH) on specific problems. Theme for this year is Making Mental Health a Global Priority: Scaling Up Services through Citizen Advocacy and Action.

Mental disorders do not choose

their victims. They occur in all cultures, in all ages and in both sexes. In almost all countries mental health is given too little concern.

This is aggravated by lack of funds, by lack of facilities and by lack of nearly all the resources required to advance the causes associated with mental health.

For this year, the World Federation for Mental Health made it a point to seek everyone's concern in battling mental health. This is done through strengthening services and the participation of the citizens.

Mental disorders are highly prevalent and they cause considerable

burden on individuals, families, and societies. Human, social, and financial resources are needed to provide access to effective and humane treatment for people with mental disorders. Mental health is now on the global public health agenda but the task is far from complete. Much more effort is required to change policy, practice and service delivery systems.

Through this year's theme, we could eliminate the stigma and discrimination the people with mental disorders feel. Through right public information, people who do not suffer with such disorders would understand their suffering counterparts and could help them improve their lives. And through the supply of right information for the unaware public, they could share their lives to those people with mental health disorders.

Started as a way to raise awareness and reduce discrimination of persons with mental disorders, advocacy has continued to be the tool most used to create change in global mental health movement.

The WHO 2001 World Health Report outlined a series of recommendations that can serve as a framework for the sustained advocacy needed in every country to make mental health a high priority in public health. It includes changing the current fragmented and incomplete mental health systems to provide for increased mental health treatment in primary care settings, making essential psychiatric medications available at all levels of health care and training health care professionals, expanding the availability and accessibility of community-based mental healthcare, educating the public to reduce the stigma and the toleration of discrimination against people with mental illness, establishing national policies, programmes and legislation to drive change in planning, funding and practice of mental health service delivery.

Making mental health a global priority is everybody's business and is in everybody's self interest. Mental illness and mental health problems are common, affecting 20- 25 percent of all people at sometime in their life. They are also universal- affecting all countries and societies and individuals of all ages. What better reason than this do we need to become advocates for better mental health and for the highest quality system of mental healthcare available for all?

That's the message of World Mental Health Day 2008- and that is why knowledgeable, concerted and continued advocacy by the people most directly affected by these disorders- people living with mental illness, and their friends, fellow workers and students- is so important to the ultimate success of the global health movement.

Each of us has a stake in this movement; each of us has a role to play. Every one of us can be an effective advocate for ourselves, our family members and /or people in our communities. When asked about responsibility, the Dalai Lama stated, "Responsibility does not lie with leaders of our countries or with those who have been elected to do a particular job. It lies with each of us individually." ■



All-Encompassing

HOME U.S. ELECTIONS '08 WORLD BUSINESS & TECH HEALTH & SCIENCE ENTERTAINMENT PHOTOS PEOPLE BEST & WORST LISTS MAGAZINE TOPICS

The three building blocks of the foundation of any portal are undoubtedly the content it comprises, the technology used in its development and sustenance and finally, where and how it is hosted. While for the latter two, viz. technology and hosting, a large number of 'off the shelf' standard solutions are available, thanks to the advancement in technology tools and techniques the world over. There is no standard solution available for the biggest challenge of them all, ie. the content. Hence content is of utmost criticality in the overall realm of crucial success factors.

As content is the key for the success of the portal, it is very crucial to keep it updated and current. Strong and significant presence of Kerala will henceforth be available in the national portal of India with clear, complete, comprehensive and concise content. C-DIT will provide the content on Kerala to the national portal. Chief Minister and also the Chairman of C-DIT V.S. Achuthanandan inaugurated the programme by uploading content based on help desk on atrocities against women to the national portal in a function convened at Thiruvananthapuram recently. C-DIT, KSITM and NIC are the main stakeholders behind the venture.

The National Portal (<http://india.gov.in>) has been designed, developed and hosted by National Informatics Centre, the premier ICT

organisation of the Government of India. National Portal of India is a vast repository of diverse content contributed by Government entities across the country. It is imperative that these varied entities contribute the content in a standardised format so that consistency of the content on the National Portal could be ensured, not just for facilitating an effective access by the citizens but also for enabling an electronic exchange of information between the National Portal and other Indian Government Web sites.

Centralised Content Repository

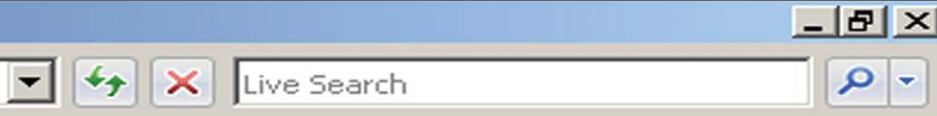
The primary objective of this

content framework is to ensure that the contributors, belonging to any constituent of the Government at any level, impart content in a pre-set standardised format through a Content Management System (CMS). These contents contributed using the CMS go into a centralised content repository for consumption of the visitors. It is expected that this framework will be followed while creating, developing or managing any content for the National Portal of India.

In the past few years, a large number of websites belonging to various ministries, departments, state governments, districts, organisations



Chief Minister V.S. Achuthanandan uploads first content under CSP to National Portal.



Information Network

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and projects, which offer a lot of information and different services to the citizens have sprung up. In such a case citizens have to visit a large number of web sites to avail a single service. Different web sites are following different technology standards, design, lay-outs, navigation architecture etc. resulting in a lot of inconvenience at the citizens' end and this requires a lot of learning on their part to even access these services, thus defeating the very purpose of various e-governance initiatives.

National portal of India

For making such information and services accessible in a convenient manner, need to establish a one-stop source for all the government information and services was felt. The concept of having a single unified interface could prove beneficial as compared to having multiple web sites of different departments simply because it saves the citizen from searching across a large number of sites, with diverse design and navigation pattern in order to look for the desired information or service.

This led to the genesis of National Portal of India - Gateway to over 5000

Indian Government websites facilitating a single window based availability of government information services.

In order to fulfill this endeavour, the MICT as part of National E-governance Project (NEGP) decided to find and appoint Content Service Provider from all States and UTs of the country. Kerala is the second state identified and appointed as Content Service Provider (CSP) to the National Portal.

Best Bet for Good Governance

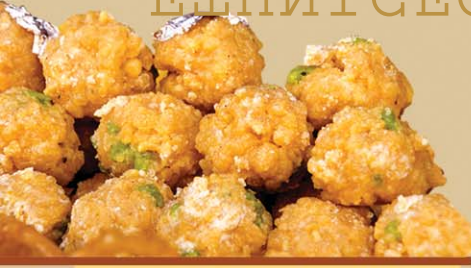
C-DIT, the largest web service maintenance organisation in the State has been chosen as the content service provider to the National Portal of India. An agreement in this regard was signed between KSITM and C-DIT. Under this agreement C-DIT collects weekly data from Government departments and prepare the content suits for the National Portal. The content is then hosted at the National Portal and department websites as and when the national committee for content management approves them. The main objective of this endeavour is the realisation of good governance by universalising the delivery of

Government information and service in terms of time and space so that a wide range of citizens, businesses and other stake holders both within the country and abroad are benefited. By providing a unified interface and acting as a logical front-end to the e-government initiatives, the edict of the portal is to facilitate the foundation of a healthy relationship between the Government and the citizen through the collaborative efforts of various Indian Government Ministries and Departments at the Central/State/District level.

In today's era of Knowledge Management, it has been well realised that knowledge capital or intellectual capital is more important to the success of any entity than physical capital. The knowledge capital either lies in the minds of people or exists in the form of 'Content' or formal written down expressions. Therefore it becomes all the more critical that this content is tapped properly and is made accessible to the people it is meant for.

To ensure proper interaction between CSP and the Government departments a Project monitoring and Review Committee (PMRC) has been constituted under the Chairmanship of State IT Secretary. PMRC acts as an interface between CSP and the various Government departments and reviews the quarterly progress of the implementation by CSP. NIC-Kerala provides the technical support for the project. ■

The writer is Content Developer, C-DIT, Thiruvananthapuram



Laddu

Ingredients: Besan - two cups, Small cubes of kalkand - two tablespoon, Kesari powder - a pinch, Cashew nuts - 12, Cloves- 10, Oil - for deep frying, Cardamom (powdered) – Seven Nos.

Method: Make a thick batter with besan adding just enough water. Mix kesari powder in a little water. Add this to the batter. Heat oil in a pan, and when it becomes hot reduce the fire to sim. Hold a large colander ladle slightly above the oil. Pour one ladle of the besan batter and spread gently. The boondies will fall into the hot oil. Remove the boondies from the oil when they are slightly crisp. Complete the process by converting all the batter into boondies.

Sweet Poha (Avil)

Ingredients: Poha - two cups, Jaggery - one cup, Ghee- two tablespoon, Cardamom (powdered) – four Nos., To garnish- fresh coconut- two tablespoon, Banana pieces- one cup

Method: Clean and wash poha (avil), squeeze out the water and keep in a plate. Keep jaggery in a frying pan; add half cup water and boil. When it comes to one string consistency (when you drop it in cool water, it won't mix with water) put the poha. Stir well from the bottom to mix thoroughly. Add ghee, powdered cardamom, mix well and add grated coconut. Off the burner. Allow to cool. Add the banana pieces before serving.



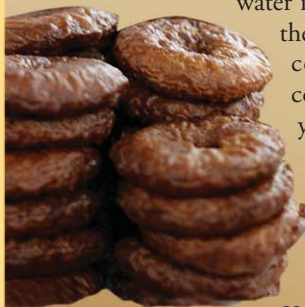
Adirasam

Ingredients: Raw rice - one kilo and 200 gms, Jaggery - half kg, Powdered cardamom - half teaspoon

Oil - half litre for deep frying

Method: Wash well and soak the rice for one hour. Drain the water thoroughly through a colander. Powder this rice, sieve nicely and keep in a plate. Grate jaggery. Keep ¼ cup water in a vessel and put the jaggery. When it comes to a thick consistency (when you drop this in water it should not dissolve), add the rice flour slowly. Keep on stirring till it comes thick dough.

Allow cooling. Dip your hand in oil and make round vadas (adirasams) with half-



inch thickness, the size of your palm over a greased polythene or banana leaf. Heat oil in a frying pan, place one adirasam at a time, and turn the other side slowly. When it comes to a golden colour remove from the oil pressing with another spatula to remove remaining oil from the adirasam. Keep a colander over a basin and place each adirasam gently. When the oil is totally removed, keep in an airtight container.

Sweet Murukku (Chakli)

Ingredients: Rice flour- two cups, Besan- ¼ cups, Butter- three tablespoon, Roasted and powdered urad dal - one teaspoon, Oil - half litre for deep frying, Powdered sugar

-five tablespoon, Sesame seeds - one tablespoon, Salt - a pinch

Method: With the above ingredients (except oil), make pliable dough. Heat oil in a frying pan. Place the dough into a chakli mould, press out the chaklies straight into hot oil in a rotating motion. After a few minutes turn the other side over. When it gets golden colour on both sides remove the chaklies with a perforated spoon. Keep over a colander plate. When cooled stored in an airtight container.



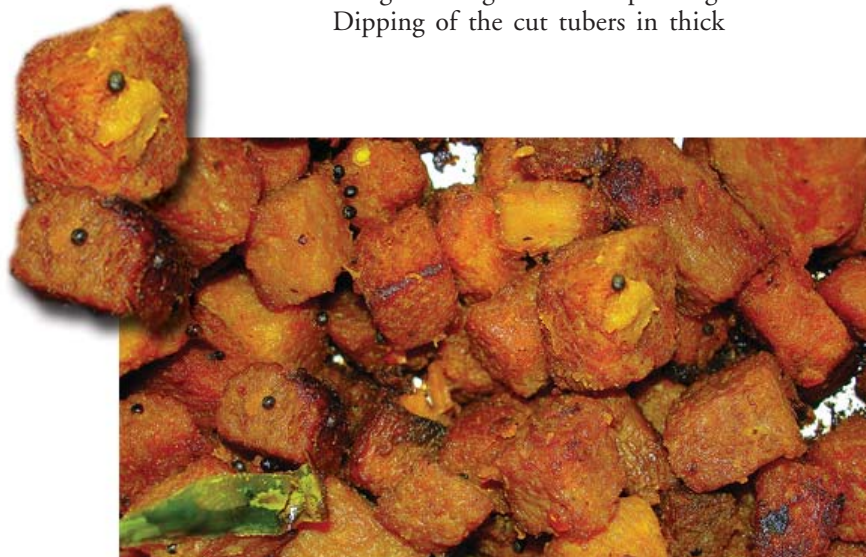
Deepavali Sweets



Chena Tuber giant

A number of local types are available in chena, but tubers of many of them have got an irritating acrid taste, owing to the excessive presence of calcium oxalate. Central Tuber Crops Research Institute has developed two non-acrid chena varieties namely Gajendra and Sreepadma with excellent cooking quality and high yield potential.

Chena (Botanical name: *Amorphophallus paeoniifolius*) known as elephant foot yam because of its resemblance to the foot of an elephant is a popular tuber vegetable of Kerala, grown in homesteads and as an intercrop mainly in coconut and banana gardens. It is slowly attaining the status of a cash crop due to its tremendous production potential, huge domestic demand as an ingredient in various delicious cuisines and increasing export demand. Chena is nutritious, containing 79 percent moisture, 1.2 g protein, 0.1 g fat, 18.4 g carbohydrates, 0.8 g minerals and fibers each, 50 mg calcium, 34 mg phosphorus, 0.6 mg iron, 260 IU vitamin A, 0.006 mg thiamine, 0.7 mg niacin and 0.7 mg riboflavin per 100



g of fresh tuber. The tubers are used in many south indian dishes and also for pickling, frying and production of flour. The tubers have blood purifier property and are used in medicines for piles, asthma, swelling of lungs, dysentery and other abdominal disorders. The paste of tubers is applied externally to reduce pain in arthritis.

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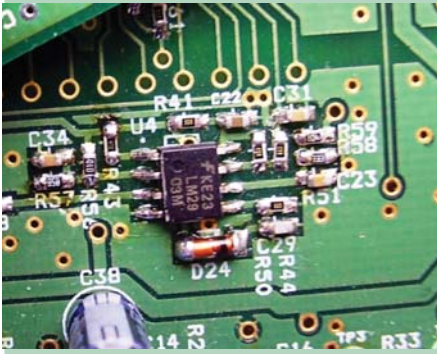
Chena grows well in the high rainfall high humid tropical climate prevailing in Kerala. It requires fairly long growing season and a rainfall of 150 cm during the crop period. Well-drained, fertile, medium textured soil is ideal for its cultivation. February-March is the best time for planting in Kerala and northeastern India. As a rain-fed crop, it can be planted in May-June or July with the onset of the rains. The land is to be prepared well by ploughing, followed by formation of pits of 60 x 60 x 45 cm size at a spacing of 90 x 90 cm. The pits should be filled with two to 2.5 kg of cow-dung or compost and top soil. Tuber cut pieces weighing about 750 g to one kg are ideal for planting. Dipping of the cut tubers in thick

cow-dung slurry mixed with trichoderma formulation followed by drying in shade for six to eight hours before planting reduces the tuber rot in the field and also increases sprouting. After planting the cut tubers at a depth of 10 - 15 cm from soil surface, the pit is to be mulched with dry leaves. About 12000 cut pieces weighing about nine to 12 tons are required for planting one hectare.

The fertilizer recommendation for this crop is 100 kg nitrogen, 50 kg phosphorus and 150 kg potash per hectare. Full dose of phosphorus and half doses of nitrogen and potash are to be applied forty five days after planting. Remaining nitrogen and potash can be applied one month after first application. It is important to take up weeding before fertilizer application and earthing up afterwards. A light irrigation should be provided immediately after planting and at regular intervals till the onset of monsoon depending on the soil moisture availability. Care should be taken to prevent water stagnation in the field. The crop comes to harvest in 8-9 months after planting. The drooping and yellowing of the leaves will indicate crop maturity. After providing a light irrigation, the tubers can be dug out using spade without causing any injury to them in the process. The tubers are then dried in shade and cleaned. The yield varies from 40 to 60 tons per hectare, depending upon the variety, size of planting material and management. The major diseases affecting the crop are collar rot, leaf blight and mosaic. An integrated disease management package involving use of mosaic virus free tubers for planting, application of neem cake in the pits, mulching and foliar sprays with Mancozeb (0.2 percent) and Monocrotophos (0.05 percent) at 60 and 90 days after planting will adequately protect the crop from these diseases.

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Chinese circuit boards to park benches



copper, while non-metal waste — accounting for 70 per cent of the circuit boards — go to landfills or incineration.

Xu Zhenming and colleagues from Shanghai Jiao Tong University, instead pulverised the non-metal materials of PCBs, mixing them with resin and polystyrene. They then heated the

mixture and pressed it to form sheets of durable material almost as strong as reinforced concrete.

The resin, an unsaturated polyester (UP), was chosen as a bonding agent partly because of its low cost. The mechanical properties of the new material show good results with tests revealing better properties than pure UP polymers.

Chinese scientists have developed a method to turn the circuit boards from old computers into a strong material that could be used to make park benches and fences.

Waste printed circuit boards (PCBs) account for around three per cent by weight of all electronic waste. Current recycling methods primarily recover only metals, such as



According to a new Australian study, regular walks to the tune of two and a half hours per week can improve memory in the over-50 population. Participants who suffered from memory loss were subjected to this study. They were split into two groups. One group lived

Dinosaurs 'lucky' to rule over ancient crocs

The dinosaurs reign on earth for hundreds of millions of years was more by luck than any innate superiority, says a UK study.

The study, the first of its kind to compare dinosaurs with the ancient ancestors of modern crocodiles, appears in the latest issue of Science Led by Stephen Brusatte of the University of Bistol, the researchers found that there was no evolutionary feature that made the dinosaurs any better than other animals living at the time.

Instead, they believe dinosaurs better survived the late Triassic (230 to 190 million years ago) extinction period than the crurotarsans - a mostly extinct group that included the ancestor of the modern crocodile.

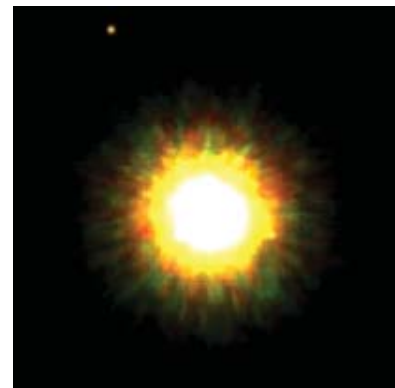
The researchers say that if dinosaurs were more superior, they should have evolved faster. They also found that crurotarsans had about twice the disparity during that period. The research builds on previous studies showing crurotarsans were more numerous and in some cases more diverse than the dinosaurs in the late Triassic.



Extra Solar Planet

The search for planets beyond our solar system has boomed in recent years, yielding good evidence for some 300 such exoplanets, as they are called in the trade. But aside from false alarms nobody has ever photographed one (in other words, image it in visible light) orbiting a normal, sunlike star. Until, possibly, now. Ron Cowen, the ace astrophysics reporter for Science News, writes that University of Toronto scientists believe they may have obtained the first optical image of an exoplanet. It is that little dot to the upper left of the star in the photo.

The body is thought to be eight times as massive as Jupiter and to lie 330 times as far from its star as Earth is from the Sun. If it really is a planet, the finding will challenge the expectation that there would not be enough material that far from a forming sun to make up a planet. Like any good science reporter, Cowen gets outside comment: "If this object really is what they think it is, what the hell is it doing out there?" That's from an expert at the Carnegie Institution for Science. Maybe it formed closer in but got kicked farther out, one source tells Cowen.





normally, while the other engaged in roughly 142 minutes of moderate exercise, mainly walking, per week. The exercise group performed better in

cognitive tests, including better "delayed recall" and lower Clinical Dementia Rating scores. Improvements were shown even a year after the six-month trial - a resounding success, by all accounts, and even more effective than anti-dementia medication. Besides, the study says, "unlike medication, which was found to have no significant effect on mild cognitive impairment, the exercise programme has numerous other benefits.

They say increasing walking in the senior population could delay the onset of dementia by 12 months, reducing the worldwide numbers of dementia patients by over nine million.

More CO₂ from Polar Ice

The thawing of permafrost in northern latitudes, which greatly increases microbial decomposition of carbon compounds in soil, will dominate other effects of warming in the region and could become a major force promoting the release of carbon dioxide and thus further warming, according to a new assessment in the September 2008 issue of *BioScience*.

The study, by Edward A.G. Schuur of the University of Florida and an international team of co-authors, more than doubles previous estimates of the amount of carbon stored in the permafrost: the new figure is equivalent to twice the total amount of atmospheric carbon dioxide. The authors conclude that releases of the gas from melting permafrost could amount to roughly half those resulting from global land-use change during this century.



October 2008

Hair Reveals Horse Temperament

A whorl of hair can tell you something about a horse's temperament, according to equine scientists in Poland. They have concluded that the location and shape of a hair swirl lying near a horse's eyes is linked with how the horse responds to handling and to new objects.

The study was with Konik horses, some of which were reared in stables, while others roamed free in a forest reserve. Four types of facial whorls existed among the horses. The whorls were classified based on their location relative to the horse's eyes. One type of whorl was an elongated or double swirl of facial hair rather than a single circle.

The various whorls became distinguished in two test situations. Horses with a single whorl located above the eyes were the most difficult to handle. In comparison, horses with a single whorl situated below or directly between their eyes were easier to manage.

Horses with an elongated or double hair whorl were the most cautious of the groups in approaching a strange object. They took much longer than the single-whorled horses to approach and touch something new.

infected with hookworms

A study published today in the open-access journal *PLoS Neglected Tropical Diseases* reveals that between a quarter and a third of pregnant women in sub-Saharan Africa, or almost 7 million, are infected with hookworms and at increased risk of developing anaemia.

Hookworms are parasitic

worms, which live in the intestine and can cause anaemia (lower than normal number of red blood cells in the blood). Their importance in causing anaemia during pregnancy has been poorly understood, and this has hampered effective lobbying for the inclusion of deworming drugs in maternal health care packages.

The study was conducted by Simon Brooker (a Reader at the London School of Hygiene & Tropical Medicine and a Wellcome Trust Career Development fellow currently based at KEMRI-Wellcome Trust Collaborative Programme, Nairobi), together with Peter Hotez (George Washington University and Sabin Vaccine Institute, United States) and Donald Bundy (The World Bank, United States).



KERALA CALLING

45



PHOTOFEATURE PHOTOFEATURE

Photos: K.V. Binu, Kannur

KERALA, the synonym for the pristine natural beauty, is one of the '**TEN PARADISES OF THE WORLD**'. It is the valley that lures everyone. **FEEL** the presence of **KERALA...h!**







Sheltering Keralites

HIS VISIT was a hot wave in the cool hills of Munnar. The declaration made by him in Kannur later felt as a cooling breeze to the landless and houseless in Kerala.

Chief Minister V.S. Achuthanandan promised the people of Kerala that all landless and houseless families in the State will have land and houses before his Government's tenure ends. He was speaking after the State-level inauguration of the title deed distribution 'mela' in Kannur.

The total housing project launched by the Government in May was to ensure houses to the houseless in the State. The distribution of title deeds was just the beginning of the Government's initiative. Thus the State has all set to be a model for the country on this front. The Government had so far assigned one acre of land each to over 2,500 Adivasi families, including 1,717 at the Aralam farm. The remaining families would get land soon.

Earlier, Chief Minister reached Munnar and visited Pallivasal, Parvathimala and Bison valley - the areas encroached by real estate mafias - to boost up the State Government's Munnar eviction drive which is a great leap in the efforts to recover alienated Government land.

In the Munnar eviction operation, 78 of the 319 cases of encroachments had been cleared and 4,836 hectares of land recovered so far. It also mobilised public opinion against the real estate mafia. As much as 5,217 hectares of encroached land had been recovered in the State since it began.

Circus Academy

KEELERI KUNHIKANNAN changed the destiny of Thalassery for ever. Now, he is being honoured with the decision of to set up a circus academy at Thalassery in Kannur district.

It was Keeleri, a gymnastic teacher who later became the icon of Indian circus, who brought circus to Thalassery and round. It was Pariyali Kannan, a disciple of late Kunhikannan, who pitched the tent of the first Malayali circus company named Malabar Grand Circus at Chirakkara in 1904. Majority of the circus company owners and artistes in India belonged to Thalassery.

Disciples of Kunhikannan also founded great circus companies such as the Malabar Circus, White Way Circus, Fairy Circus, Great Rayman Circus, Eastern Circus, Oriental Circus, Kamala Three Ring circus, Gemini Circus, Great Bombay Circus and Great Lion Circus.

The State government will acquire 10 acres of land on a fast-track basis at Kundurmala in Thalassery to set up a circus academy. A budgetary allocation of Rs 25 lakh is already in place for the preliminary ground work for the proposed academy. A decision in this regard was arrived at a high level meeting in which Sports and Youth Affairs Minister, M. Vijayakumar and Home

Minister, Kodyeri Balakrishnan, were participants. According to Kerala State Sports Council, the circus academy is aimed at providing scientific training as part of the ongoing efforts to modernise and revive Indian circus industry.

The proposed circus academy is conceived as a tribute to Kunhikannan.



Sharing the world with
TIGERS

Army Mela 2008

THE NATIVES of the state capital witnessed a novel programme called Army Mela 2008 which gave the message that "There is no place for touts in the recruiting system."

From here the recruitment to army is not a secrete activity. For the first time in the history of Indian Army, the public could participate in the process of recruitment to various branches of the Indian Army so as to ensure that it is conducted in a fair and transparent manner as the venue was shifted from the usually held Pangode military ground to Central Stadium in the heart of the city.

More than 2000 candidates from south Kerala appeared for the two day long rally. The rally ended with a colourful programme by the army men.

Military weapons and equipment display, beach landing demonstration, rescue at sea, slitering and hot air ballooning and

Bridge building among public and projects

RIGHTLY CALLED as the 'building blocks of a new freedom', the five day long campaign under Bharat Nirman programme of the Press Information Bureau in Athirampuzha served as a public relations exercise about the important projects of Central Government.

Because, the block in the implementation of programmes by the Government is the lack of awareness of the public about them.

The Flagship Programmes of the Central Government got off to a colourful start at Athirampuzha in Kottayam on September 22. Loans sanctioned under various central schemes by two prominent banks were distributed at the function.

In the second day, free medical camp and a seminar on many Centrally aided programmes were conducted. Career Guidance to higher secondary students, seminar on Bharat Nirman Package, Jawaharlal Nehru National Urban Renewal Mission and other infrastructure development programmes of the Central Government and quiz programme for high school students were some of the highlights of the third day. Free eye check up camp, seminar on Right to Information Act and presentation on total sanitation campaign were the main attraction of the fourth day. The fifth day was enriched by discussions and talks on women empowerment and Central projects for the welfare of minority and weaker sections, training in soap making, quiz competition for Anganwadi workers etc.

Minister for Public Works, Mons Joseph, inaugurated the valedictory session of the five-day programme.



motorcycle display were some of the events held as part of the ten-day Army Mela-2008.

The main objective of the mela was to showcase to the people the operational excellence as well as spirit of adventure and high quality weapons and equipment the army has, according to Major General E J Kocheekkan, General Officer Commanding, Southern Area.

WONDER about the importance of cohabitation of humans with tigers? A national seminar, inaugurated by Forest Minister, Binoy Viswam, at the two-day national seminar held at Thekkady in connection with the platinum jubilee of the Periyar Tiger Reserve has the answers.

All started more than a century back with the construction of Mullaperiyar dam in the Periyar River in 1895. The forest around the reservoir was declared as reserve forest known as Periyar Lake Reserve in 1899. This area was declared as Nellikkampetty Sanctuary (600 sq. km.) in 1934 and was renamed as Periyar Wildlife Sanctuary in 1950. It was declared a Tiger Reserve in 1978. The core area of the Reserve, 350 sq. km. was declared a National Park in 1982.

Now the old Nellikkapetty Sanctuary celebrated its platinum jubilee with 62 kinds of mammals, 320 varieties of birds, 45 kinds of reptiles, 27 different kinds of amphibians, 38 varieties of fish and 160 butterfly varieties.

The seminar discussed the status and distribution of tigers and co-predators at national and regional level, threats to tiger conservation and techniques for the investigation of wildlife crimes and related trade, emerging trends and recent advances in the estimation techniques of monitoring tigers, co-predators and prey and their habitats, participatory management of tiger reserves, ecotourism and critical tiger habitats and conservation at the level of landscapes.

E S Bijimol MLA presided over the function. Inspector General of Forests Rajesh Gopal gave the keynote address.

Diamond is really precious



Diamond represents the most valuables. When Kerala reached atop in the competition conducted by IBN joining hands with Outlook Group to find out India's Best Big State by bagging diamond position in most of the parameters, the said statement is asserted. The award was intended to recognise human and social development in the states of India and for awarding the efforts of the leaders of new India.

Kerala attained the top position in the four parameters viz. Healthcare for becoming a guiding force in matters related to infant mortality, life expectancy, and medical access; in Education for high literacy rate, reading ability and educational development; in Women Empowerment for high female literacy, sex ratio and

fertility rate for making India a more homogenous and forward-looking society; and in Basic Infrastructure Development with pucca roads, power, housing and telecommunication to make the State compatible with the growth patterns.

In the rest of other six parameters too, Kerala has a comfortable higher position. Thus the agency needed not think twice to honour Kerala with the Best State Award which is for the state, which has formulated and executed the best policies on all the parameters considered, and achieved best results among all the other states of comparable size and population.

Sports and Youth Affairs Minister, M. Vijayakumar, received the awards for the State Government.

HIS INVENTION HAS BEEN GOT
PATENTED AND THE NEWS SHOCKED
HIM. HE FORGOT EVERYTHING, DOCTOR!

